How to Use this Manual

This manual describes your new notebook and contains all the information you need to set up and use the notebook. Whether you are a new or an experienced user, you will benefit more from this manual if you are familiar with its organization. This manual describes the PC-9300T and PC-9300D notebooks. Unless otherwise specified, the descriptions in this manual apply to both models. Illustrations are based on the PC-9300T notebook.

The manual is divided into five chapters, plus appendixes.

Chapter 1 Introducing the System gives a general introduction to the notebook, explaining the main functions such as the keyboard, the indicator lamps, etc.

Chapter 2 Using the Notebook for the First Time gives the basic steps for getting your notebook up and running.

Chapter 3 Setup Utility shows how you can make changes to the operation and power management of the notebook by using the Setup utility.

Chapter 4 Using the Notebook describes how to carry out typical operations on the notebook such as using the disk drives, using the GlidePoint, changing the display, and so on.

Chapter 5 System Expansion describes how you can use the notebook's built-in ports and connectors to add peripheral components to your system.

Appendixes provide advice on the routine care and maintenance of the notebook, a guide to troubleshooting problems that may arise in the use of the notebook, and detailed specifications on your notebook and the built-in ports. For your convenience, an index is provided at the end of this manual.

In addition to this manual, you may want to consult the Windows 95 manual, and the manuals for your software applications. The Sharp Online Manual, accessible from the Windows 95 Start Menu, will also help your computing.

Manual Conventions

This manual uses different text styles to help identify different operations and functions of your notebook.

Keyboard Keys

When referring to specific keys on the keyboard, the key label appears in boldface as shown below:

> Press **Enter** to execute the installation.

When referring to a combination of keys that are pressed simultaneously, the key labels are separated by a plus sign (+) as shown below:

> Pressing **Ctrl + Alt + Del** lets you reset your notebook.

Sample Entries/Prompts/Screens

This manual contains sample screens that might appear during the operation of your notebook, including prompts (text generated by the system) and entries (text you type on the keyboard). These are printed in a typeface like the one below:

```
Re-enter your password for verification.
```

In the following case, press the **Enter** key after you type the command.

```
C:\>FORMAT A: Enter
```

The screens reproduced in this manual may differ slightly from the screens you see on your notebook.

File Names

References to commands, utilities, device drivers, directory and file names in this manual are printed in upper case.

> The CONFIG.SYS file contains the specifications for configuring the system.

Section Titles/Possible Parameters

In a section of text, words which represent selectable parameters, or words which refer to other sections in the manual are italicized.

> Select *Disabled* to disable the floppy disk drive. See the section *Making Changes in the Main Page* for more details.

Notes and Cautions

Icons and italic text are used for notes and cautions, to make important information stand out.

Notes: *Notes give you helpful hints or suggestions on ways of performing certain operations.*

Cautions: *Cautions alert you that damage to equipment or loss of data may occur if certain procedures are not followed carefully.*

Recording Information

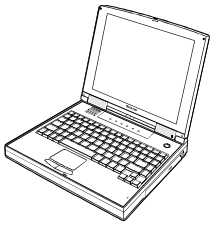
For future reference, please record the following information in the spaces provided below.

Model Number:	
Serial Number:	
BIOS Version Number:	
Date of purchase:	
Dealer's Name:	
Place of purchase:	
Password:	

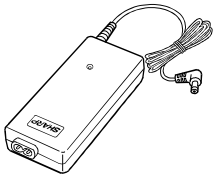
The serial number is printed on a sticker located on the bottom of the notebook. You will see the BIOS Version number on the LCD screen when you turn on the notebook.

Unpacking the Notebook

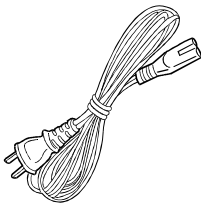
Please check that all the accessories listed below have been included with your computer.



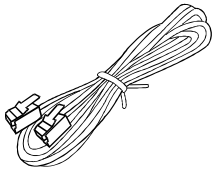
Main Unit



AC Adapter



Power Cord



Modem Cable (US & Canada only) (PC-9300T only)

- Windows 95 Manual Pack (CD-ROM and Manual)
- Backup CD-ROM
- CD-ROM Setup Boot Disk
- Operation Manual
- Re-installation Instructions
- TranXit Quick Reference Guide
- Sharp Import/Export User's Guide
- SuperVoice Manual (US & Canada only) (PC-9300T only)
- AT Command Reference Manual (US & Canada only) (PC-9300T only)

In addition, your notebook package includes various software license agreements, warranty cards, and so on. If any of the listed accessories are missing, or if the main unit or accessories are damaged, please consult your dealer (or in case of US, a Sharp Customer Service Center at 1-800-BE-SHARP).

Note: *Only the PC-9300T is equipped with a fax/modem. The fax/modem is available only in the USA and Canada.*

About the System Documentation

The manuals included with your notebook are used as follows:

Operation Manual (this manual)

This manual gives instructions on how to operate your computer successfully. It also explains how you can use some of the software that is pre-installed on the hard disk drive, and how you can add extra devices to your notebook, either internally or externally.

Re-installation Instructions

This manual explains how to re-install the Windows 95 operating system and the utility programs that are pre-installed on your notebook's hard disk drive.

Windows 95 Manual & License

This manual explains the basic procedures for using Windows 95.

TranXit Quick Reference Guide

This guide is an introduction to the TranXit infrared communications program and basic instructions.

Sharp Import/Export User's Guide

This guide is an introduction to the Import/Export infrared communications program.

SuperVoice Manual (US & Canada only) (PC-9300T only)

This manual explains how to use the fax/modem software.

AT Command Reference Manual (US & Canada only) (PC-9300T only)

This manual explains the AT command set, S-registers and result codes of the built-in fax/modem.

Note: *All the programs supplied with this notebook have already been installed on the hard disk, so please disregard all installation instructions mentioned in the manuals. If you need to reinstall the software, please refer to the* Re-installation Instructions *and to each software manual.*

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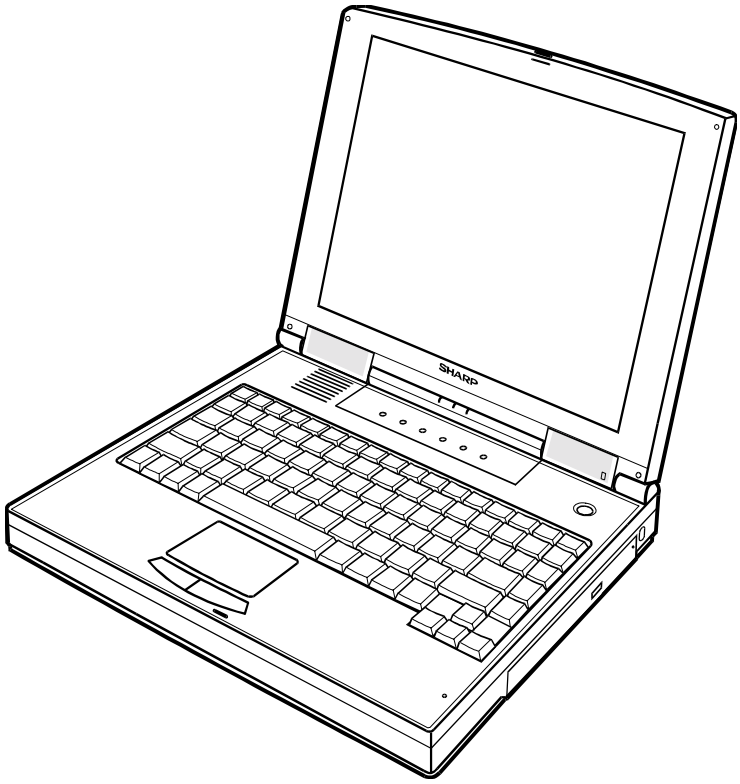
CHAPTER 1

Introducing the System

This compact-size notebook computer is packed with a full range of multimedia and communications features found on a full-size desktop computer. This chapter gives general information on the system components and functions.

Introduction



This lightweight compact-size notebook computer has the following features.

- 150 MHz Pentium processor with internal cache memory, and 256K of level 2 cache memory.
- 16 MB EDO memory (upgradable to a maximum of 48 MB).
- Built-in hard disk drive and 1.44 MB floppy disk drive.
- Color display using either a dual scan 12.1" diagonal screen or an active matrix 11.3" diagonal screen. Screen sizes are measured diagonally.
- Built-in 10X CD-ROM drive (average speed).

- Built-in 33.6 Kbps fax/modem with software support for voice mail, speakerphone, and telephone answering (US & Canada only) (PC-9300T only).
- Two Type-II or one Type-III compatible PC card slots, with Zoomed-Video support on the lower slot.
- Removable Nickel-Metal Hydride battery pack.
- A 64-bit display controller, which operates over a high-speed PCI bus and includes a video accelerator and 2 MB of video memory. Display output is Super VGA 800 x 600 dots.
- Fast infrared communication, and I/O (input/output) ports for serial and parallel devices, external PS/2 keyboard or mouse, a joystick or a MIDI device, analog monitor and video-out (NTSC/PAL).
- Latest graphical user interface, and an easy-to-use GlidePoint touchpad.
- 16-bit stereo sound system compatible with the Sound Blaster Pro and Windows Sound System standards. Built-in microphone, speakers, and jacks for external microphone and stereo line in and out.
- Automatic power down of peripheral devices and system components, to save battery power, controlled by an advanced power management function.
- Security feature which allows password protection on start-up and restricts access to the floppy disk drive.
- Pre-installed Windows 95 and applications software.

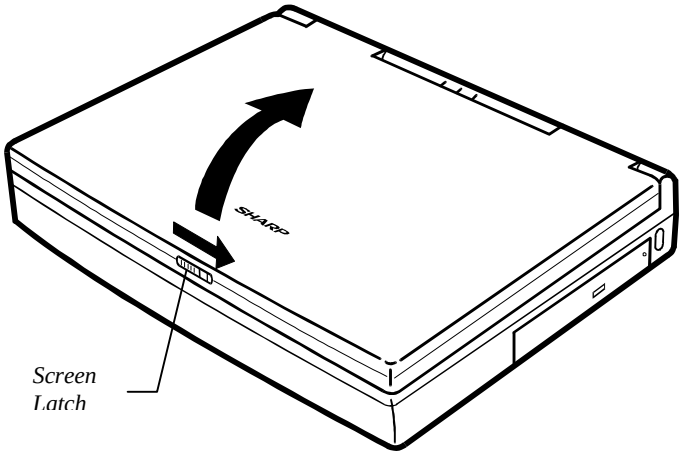
A Brief Tour of the System

In this section, you will learn how to locate and use the primary components of the notebook.

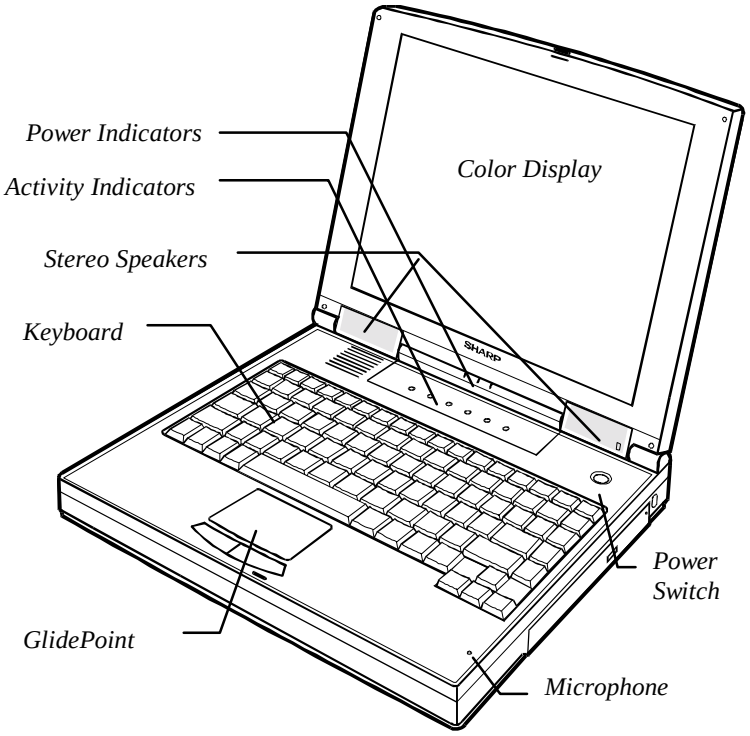
Opening the Unit

Open the display as follows.

1. The screen locking latch is located in the center of the front edge of the notebook. Slide the latch to the right and then raise the screen cover.
2. Set the display to the best viewing angle.



Inside the Main Unit



Color Display

The PC-9300T uses an active matrix color display which has a diagonal length of 11.3".

The PC-9300D uses a dual scan color display which has a diagonal length of 12.1".

Power Switch

This switch turns on the power to the system. To turn the power on, press this switch. When the notebook has been suspended to disk, the power switch is used to resume it.

Keyboard

The keyboard has 87 keys (US English) or 88 keys (others). Many functions of the notebook can be controlled by pressing special key combinations (hot keys).

Stereo Speakers

The speakers will output the sound that your notebook's software generates, or the sound that you input through the sound ports.

Caution: *Avoid placing floppy disks, or other magnetic storage media on top of the speakers. The magnet inside the speakers may damage the data on the disk.*

GlidePoint

The GlidePoint is located just in front of the keyboard. The left and right selection buttons are placed just in front of the GlidePoint surface. The GlidePoint functions just like a mouse or trackball.

Power Indicators

The three power indicator lamps are located between the hinges of the screen cover. From left to right, the power indicators have the following functions.

AC Power

When the notebook is operating using power supplied through the AC adapter, this indicator turns on with a green color when the notebook is on, or blinks when the notebook is in the suspend to RAM mode.

Battery Power

When the notebook is operating using power supplied through the internal battery, this indicator turns on with a green color when the notebook is on, or blinks when the notebook is in the suspend to RAM mode.

Battery Charge

This indicator shows the status of the battery. When the battery is charging it turns on with an amber color. When the battery is fully charged, it changes to green. When the battery is low on charge, it flashes with a red color.

Activity Indicators

The six activity indicators are located just above the center of the keyboard. The lamps turn on when the function that they represent is active. From left to right, the activity indicators have the following functions.

CD-ROM

This indicator turns on whenever the system is reading from a disc in the CD-ROM drive.

Hard Disk Drive

This indicator turns on whenever the system is reading from, or writing to the hard disk drive.

Floppy Disk Drive

This indicator turns on whenever the system is reading from, or writing to a diskette in the floppy disk drive.

Num Lock

This indicator turns on when the keyboard is in Num Lock mode. In this mode, the numeric keypad embedded in the keyboard becomes active.

Caps Lock

This indicator turns on when the keyboard is in Caps Lock mode. In this mode, all typed text uses capital letters.

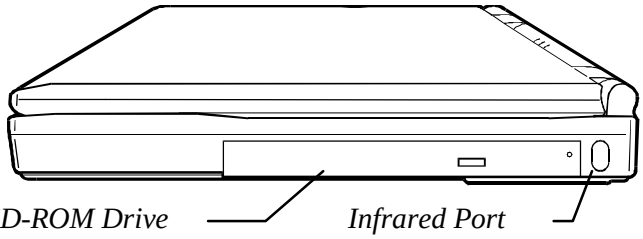
Scroll Lock

This indicator turns on when the keyboard is in Scroll Lock mode. In this mode, text will scroll onscreen without changing the position of the cursor.

Microphone

The microphone is located near the front right edge of the notebook. The microphone can be used to record sounds, or it can act as a telephone mouthpiece when you are using the built-in fax/modem as a speakerphone (US and Canada only) (PC-9300T only).

Right-side Components



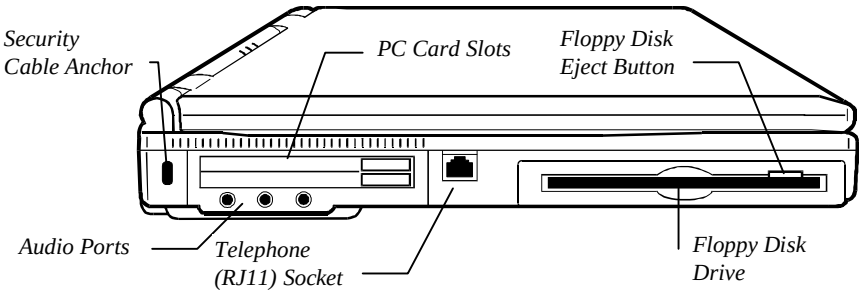
CD-ROM Drive

The CD-ROM drive can be used to read from CD-ROM data discs, video discs, and audio discs. Your notebook identifies the CD-ROM drive as drive R.

Infrared Port

The infrared port supports the ASK infrared standard, and also the IrDA infrared standard. Your notebook identifies the infrared port as COM2.

Left-side Components



Security Cable Anchor

This rectangular hole can be used as an anchor point for a computer security cable. You can use this cable to lock your notebook to a desk or some other secure location, and so prevent theft.

PC Card Slots

There are two Type-II PC card slots. You can also use a Type-III PC card in the lower slot. The lower slot has an integrated Zoomed Video port so that you can use PC cards that support the Zoomed Video standard (ZV cards) in the lower slot. Eject buttons for both slots are placed at the right side of the slots. The buttons are folded down when not in use. Your notebook identifies the PC card slots as drives D and E, when you are using PC cards that store data.

Audio Ports

The three audio ports are located below the PC card slots. From left to right the audio ports are:

Audio Input Jack	You can use this jack to input stereo sound from other devices, such as a radio or a tape recorder, into your notebook.
External Microphone Jack	You can use this jack to input the sound from an external microphone into your notebook. When an external microphone is connected to this jack, the built-in microphone is automatically disabled.
Audio Output Jack	You can use this jack to output the sounds generated by your notebook to an external device such as stereo loudspeakers or headphones. When an external device is connected, the built-in speakers are automatically disabled.

Telephone (RJ11) Socket (US and Canada only) (PC-9300T only)

The telephone socket is used to connect the internal fax/modem to a telephone cable that terminates in an RJ11 connector.

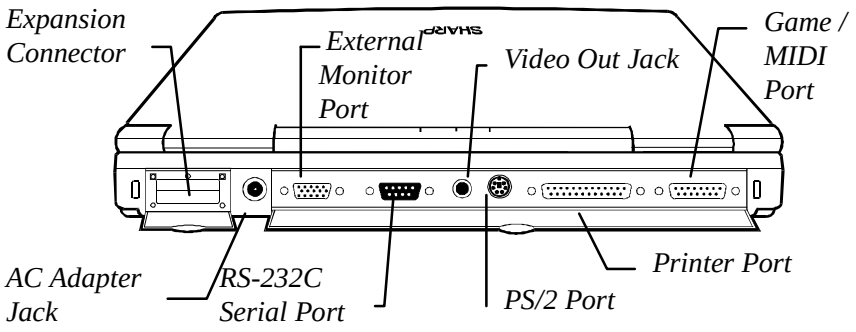
Floppy Disk Drive

The floppy disk drive can be used to read and write to 3.5" floppy disks with capacities of 720K or 1.44 MB. Your notebook identifies the floppy disk drive as drive A.

Hard Disk Drive

The hard disk drive is an internal component. It operates using an Enhanced IDE (Integrated Drive Electronics) interface. Your notebook identifies the hard disk drive as drive C.

Rear-Edge Ports



The rear-edge of the notebook has two connector compartments and an AC adapter jack. You can access the connector compartments by pulling the compartment covers open.

Expansion Connector

The expansion connector is in a separate compartment. The expansion connector is used to connect your notebook to an optional port replicator (CE-M50PR). For information on the port replicator, see the manual supplied with the CE-M50PR port replicator.

AC Adapter Jack

You can plug the cable from the AC adapter into the AC adapter jack in order to power your notebook from the AC adapter.

External Monitor Port

You can use the external monitor port to connect your notebook to an external monitor that supports Super VGA and extended SVGA resolutions.

RS-232C Serial Port

You can use this port to connect your notebook to a serial device such as a serial printer or a serial mouse. Your notebook identifies this port as COM1.

Video Out Jack

Use the video out jack to connect your notebook to a PAL or NTSC format TV receiver.

PS/2 Port

Use this port to connect your notebook to a PS/2 device such as an external keyboard or an external pointing device.

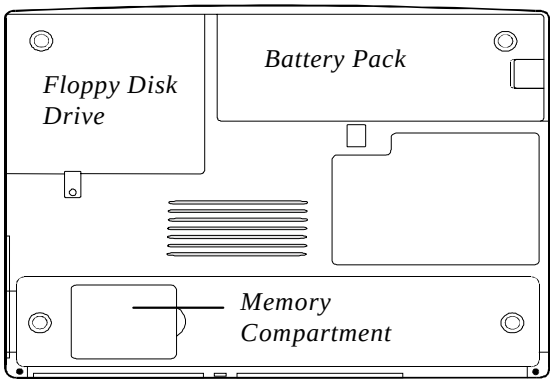
Printer (Parallel) Port

Use this port to establish parallel communications with another device such as a printer. Your notebook identifies the printer port as LPT1.

Game/MIDI Port

You can use this port to connect the notebook to a joystick or a MIDI device.

Components in the Unit Base



Battery Pack

The battery pack is removable. To remove the battery, slide the two latches open and then remove the battery from the compartment.

Memory Compartment

The memory compartment can be used to install an optional memory module (CE-A311B, CE-A312B, or CE-A323B) in order to add extra memory to your notebook.

Floppy Disk Drive

The floppy disk drive can be easily removed for service. We recommend not to remove the floppy disk drive module under normal operation.

CHAPTER 2

Using the Notebook for the First Time

This chapter explains the procedures that you should follow the first time that you use the notebook.

Connecting the AC Adapter

Your notebook can be powered by the internal, removable, rechargeable battery pack, or it can be connected to a wall power outlet using the supplied AC adapter. More information on the notebook's power requirements can be found in the topic *Power Supply* in Chapter 4.

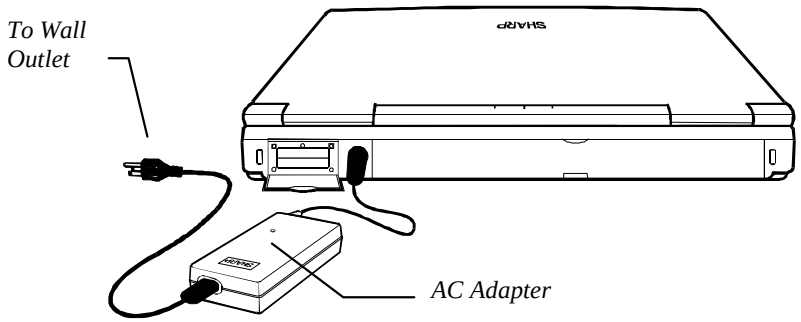
Note: *Use the AC adapter to connect your computer to a power source before turning on your notebook for the first time.*

To start using your notebook, follow the steps below:

1. Make sure the notebook is turned off.
2. Connect the cable from the AC adapter to the AC adapter jack.
3. Connect the power cord to the AC adapter.

Caution: *Only use the approved AC adapter (EA-905V) that is supplied with the system. Do not use any other adapter than the one supplied with the system. The AC adapter can be connected to a power outlet using a voltage level of from AC 100 - 250 volts. The voltage rating of the power cord is, however, variable from country to country. Please consult your vendor for more information.*

4. Insert the AC power cord plug into a wall outlet.



System Start-up and Shut-down

1. After you have connected the AC adapter, open up the screen cover by sliding the screen locking latch to the right.
2. Press the power switch to turn on the notebook.

***Note**: If you see the following message at the boot time, press **F2**, then **Enter** to run the Setup utility with the default values.*

```
System battery is dead - Replace and run SETUP
Real time clock error
Mouse initialized

Press <F1> to resume, <F2> to Setup
```

*In the Setup utility, set time, date and other fields appropriately. Then press **Esc**, then **Enter** to save the values and restart the notebook. For information on the Setup utility, see Chapter 3.*

3. Your notebook will execute a brief Power On Self Test. This test initializes all the major components of the system and verifies that they are operating correctly. The notebook will then load the Windows 95 operating system.

***Note:** If you press the **F8** key while your notebook displays the message "Starting Windows 95....", you can select an alternate start-up than Windows 95. See the Windows online help for more information.*

4. After the notebook has loaded Windows, you can click on the *Start* menu to begin computing in the Windows environment.

***Note:** Access to Electronic Services like America Online and CompuServe, as offered by this version of Windows 95, may not be available in all countries of purchase of this notebook.*

Personal Windows Installation

Windows 95 has been partially installed on your notebook. The first time you use your notebook, Windows will automatically complete the installation by asking for personal details such as your name, your time zone and so on. Follow the onscreen prompts to complete the Windows installation.

Note: *Some machines may show a Safe Recovery message when they are turned on. This message is created because the notebook has been turned on and then off again without the Windows 95 final installation. For example, the system vendor may have turned the notebook on and off in order to verify that it was operating correctly. You can ignore the Safe Recovery message and continue with the Windows installation.*

Setting the SHARP Original Wallpaper

After setting up Windows 95, set the SHARP original wallpaper in the following procedure.

1. Double-click the "*Click me to set up SHARP Wallpaper*" icon on the Windows desktop.
2. When the message appears, click *OK*. The SHARP original wallpaper is displayed on the screen as a default.

System Shut Down

1. Press the **Alt + F4** keys, or click on *Shut Down* from the *Start* menu.
2. In the *Shut Down Windows* dialog box, select which method of shut down you prefer, and then press the **Enter** key or click on the *Yes* button.
3. Your notebook will automatically shut down.

Note: *Do not turn the power off or reboot while the system is accessing any of the disk drives. This may result in damage to the drive or disk, or loss of data. After the notebook is turned off, wait at least five seconds before turning the notebook back on. Turning the power on and off too quickly can damage the notebook.*

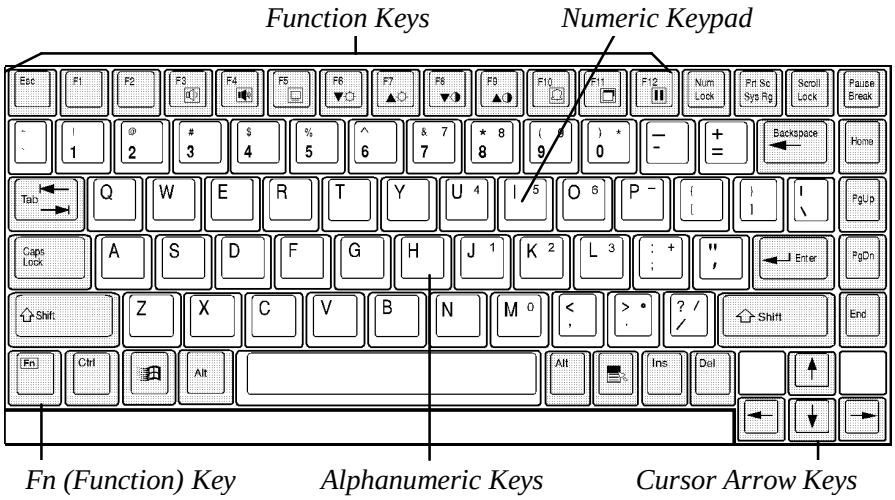
When the notebook is turned off, we recommend that you keep the screen cover closed to protect the screen from dust and/or damage.

Using The Keyboard

The built-in keyboard has 87 keys (US English) or 88 keys (Others).

About the Keyboard

The layout of your notebook's keyboard is similar to a normal keyboard. In addition, there are twelve function keys, cursor control keys, and other special function keys such as **Ctrl**, **Alt**, **Esc**, **Prt Sc**, **Pause**, **Pg Up**, **Pg Dn**, **Home** and **End**.



The Numeric Keypad is embedded in the right-of-center alphanumeric keys. The keypad is activated and deactivated by pressing the **Num Lock** key. The Num Lock indicator turns on when in Num Lock mode.

Key Legends

The keycaps are engraved with different legends to indicate the function of the key.

Large Light-Gray Legends

These represent the standard function of the key.

Small Blue Legends

These represent the function of the key if the **Num Lock** key has been pressed and the keyboard is in Num Lock mode.

Function Key Icons

These represent special functions that are embedded into the Function Keys of the keyboard. They are activated by holding down the **Fn** Function key and then pressing the appropriate key.

Special Key Combinations

Special key combinations allow you to use various functions of the notebook easily.

With the Ctrl and Alt Keys

Ctrl + Alt + Del

Pressing the **Ctrl + Alt + Del** key combination halts all operation of your notebook and displays the message on the screen. Pressing this key combination again will restart the notebook. This is known as a “warm boot”. This key combination may be useful if you encounter hardware or software problems which “lock up” your notebook.

Caution: *The use of the* ***Ctrl + Alt + Del*** *key combination will result in the loss of all data in memory.*

With the Fn Key

The **Fn** key, in combination with other special keys, controls some of the notebook's features. Symbols are printed on the keyboard to show the functions.

Fn + F3

This key combination decreases the volume of the audio system. Hold down the keys until the volume is correct.

Fn + F4

This key combination increases the volume of the audio system. Hold down the keys until the volume is correct.

Fn + F5

Each press of this key combination changes the video output of the notebook. The operation of this key combination changes depending on which display devices are connected to your notebook on start-up. See the table below:

	Ext. Monitor (LCD + CRT)	**TV Receiver (LCD + TV)**	**Ext. Monitor & TV Receiver (LCD + CRT + TV)**
Start-up Display	LCD + CRT	LCD	LCD + CRT
First Press	LCD	No Display	LCD
Second Press	CRT	*TV	CRT
Third Press	CRT **Note 1**	LCD	TV (& CRT) **Note 1**
Fourth Press (Return to First)	LCD + CRT	LCD	LCD + CRT

* This display only occurs if you have *Enabled* the field *Display to TV* in the Advanced page of the Setup utility.

Note 1: If the field *Display to TV* is *Disabled*, this key press is omitted. If the field *Display to TV* is *Enabled*, the display on the external monitor will change to the resolution of a TV display.

Note: *When using both the LCD and an external monitor at the same time, the external monitor should have the capability to display 800 x 600 resolution. Some external monitors which support only 640 x 480 resolution do not work properly.*

Fn + F6

This key combination darkens the built-in screen.

Fn + F7

This key combination brightens the built-in screen.

Fn + F8

This key combination decreases the contrast of the built-in screen. Hold down the keys until the display is correct. This function only operates if you have a DSTN (dual-scan) color display.

Fn + F9

This key combination increases the contrast of the built-in screen. Hold down the keys until the display is correct. This function only operates if you have a DSTN (dual-scan) color display.

Fn + F10

This key combination switches the Battery Low beep on and off. Note that this combination disables the beep temporarily but does not change the data in the Setup utility.

Fn + F11

This key combination turns off the backlight on the built-in screen. Press the keys again to turn the backlight back on again.

Fn + F12

This key combination puts your notebook into suspend mode (either to disk or to RAM depending on the settings of the Power page in the Setup utility).

Special Windows 95 Keys

This key can be used to open up the Start menu on the Windows 95 Taskbar.

This key can be used as an alternative to the right mouse button. For example, it opens a configuration menu for objects on the Windows desktop.

CHAPTER 3

Setup Utility

Your notebook is installed with a Setup utility that lets you change the configuration of the system, and customize the security and power management parameters. This chapter explains how to run and use the Setup utility.

About the Setup Utility

Your notebook is set up correctly when it first ships. However, you might need to change the system configuration settings such as date, time, password or power management. The Setup utility consists of six menu pages:

Main	This page defines the basic system configuration.
Advanced	This page defines many of the input/output settings of the system.
Security	This page defines the security functions of the system.
Power	This page defines the power management settings of the system.
Boot	This page defines how the system boots (loads) an operating system when it first turns on.
Exit	This page defines how you exit the Setup utility.

The settings that you define in the Setup utility are saved in CMOS RAM. The information in CMOS RAM will not be erased even when you turn the notebook off. Each time you turn it on, the notebook uses this information as a reference to initialize the hardware, set up the power management routines, install the security features, and so on.

Starting the Setup Utility

You can only access the Setup utility just after your notebook is turned on. If your notebook is already turned on, shut it down and restart it. When your notebook starts, a message appears telling you to *Press <F2> to enter SETUP*. Press the **F2** key as soon as this message appears and the Setup utility will start.

Using the Setup Utility

The Setup utility menu bar has six choices: Main, Advanced, Security, Power, Boot, and Exit. You can move between each of the six pages by using the left and right arrow keys. Each page has a list of items, or *fields*. On the right of each field there are one or more *values*. You can move a highlight up and down in the list of values by using the cursor up and down arrow keys. If a field has more than one value, you can move from one value to the next by pressing the **Tab** key.

When a value is highlighted, you can change it to an alternate value by pressing the **Minus** key, or the **Space Bar**. The **Space Bar** progresses forwards through the available values, while the **Minus** key runs backwards through the available values.

Certain fields may require you to type in a value instead of selecting a pre-installed value. Some other fields are automatically set by the notebook, and so, you cannot highlight the value and change it.

Some fields might be preceded by a ▸ sign. When you highlight these fields and press **Enter**, a sub-menu appears. You can make changes to the sub-menu values in the same way as you change the main page values. When you finish making changes to a sub-menu, press **Esc** to return to the original page.

You can make the fields in one page return to their default values by pressing the **F9** key. Pressing the **F10** key restores the values you previously saved. If you need help, you can display a help message by pressing the **F1** key.

Leaving the Setup Utility

When you have made changes to the Setup utility, either press the **Esc** key, or use the arrow keys to highlight the Exit menu on the menu bar. The Exit menu has five options. Select the option you need.

Save Changes & Exit

When you select this option, any changes you made to the field values are saved, and the notebook restarts using the new values.

Exit Without Saving Changes

When you select this option, any changes you have made to the field values are discarded and the notebook restarts using the old values.

Get Default Values

When you select this option, the notebook loads the default field values. The notebook does not restart. You must use the *Save Changes & Exit* option to restart the notebook using the default values.

Load Previous Values

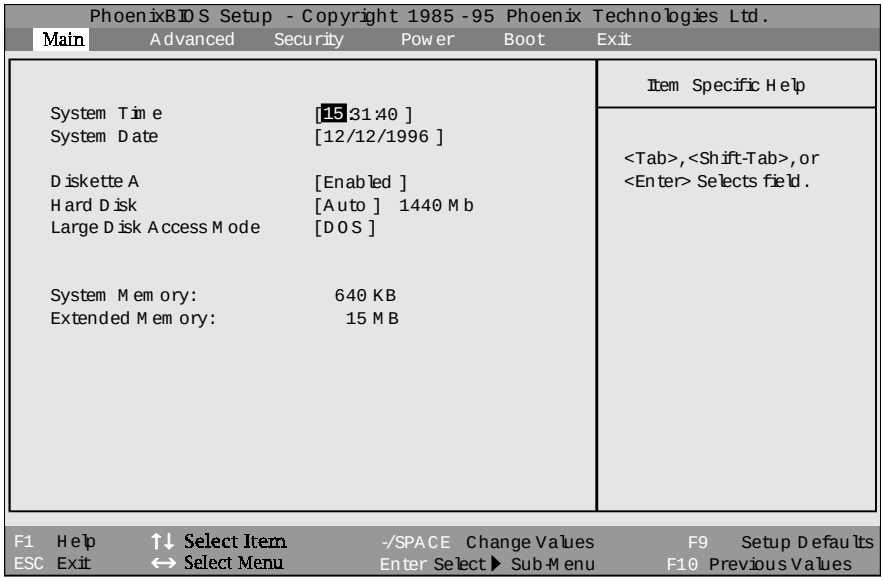
When you select this option, any changes you have made to the field values are discarded. The notebook does not restart. You must use the *Save Changes & Exit* option to restart the notebook using the old values.

Save Changes

When you select this option, any changes you have made to the field values are saved. The notebook does not restart. You must use the *Save Changes & Exit* option to restart the notebook using the new values.

Making Changes to the Main Page

The Main page of the Setup utility deals with the basic configuration of your notebook, the hardware components, the system memory, and the date and time. The illustration below shows the Main page screen.



Note: *The size of the* Extended Memory *field value varies according to the configuration of your notebook.*

System Time

Use this field to install your notebook with the correct time. Your notebook uses a 24 hour clock and the time format is HRS:MINS:SECS. Use the **Space Bar** and **Minus** keys to adjust each figure and press the **Enter** key after each figure is set.

System Date

Use this field to install your notebook with the correct date. The date format is MONTH/DAY/YEAR. Use the **Space Bar** and **Minus** keys to adjust each figure and press the **Enter** key after each figure is set.

Note: *You can also change the time and date held by your notebook by double-clicking on the time button at the left of the Windows Task Bar. The Setup utility will automatically adjust the date and time to stay current with the changes in Windows date and time.*

Diskette A

Use this field to disable or enable the built-in floppy disk drive. You might want to disable the floppy disk drive as a security measure.

Hard Disk

Leave this value at the default setting *Auto*.

Large Disk Access Mode

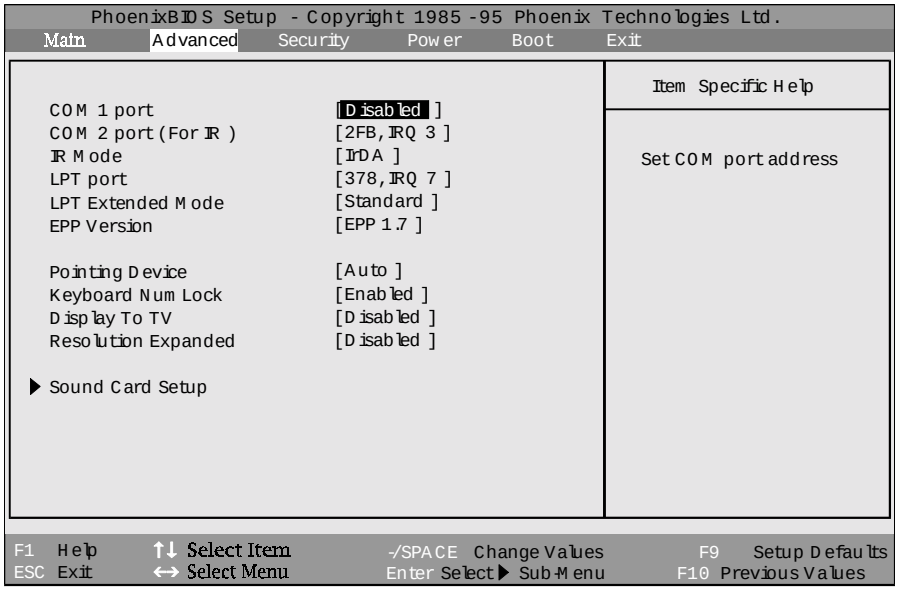
Normally you can leave this field at the default value *DOS*, since your notebook is considered a DOS-type computer. If you install a completely different operating system such as UNIX or Netware, you might need to change the value to *Other*.

System Memory and Extended Memory

These two fields are detected automatically at start-up time. Therefore you cannot highlight these fields and make changes to the values.

Making Changes to the Advanced Page

The Advanced page is used to configure more advanced features in your notebook. The illustration below shows the Advanced page.



COM 1 Port

This field lets you assign an address and an interrupt request number for the RS-232C serial port on the rear side of your notebook. As a default, this value is set to *Disabled*. To use the serial port, change the value appropriately so that it does not conflict with other ports.

COM 2 Port (For IR)

This field lets you assign an address and an interrupt request number for the IR port on the right side of your notebook. Leave this value at the default (2F8, IRQ 3) unless you have a specific reason to change the address and IRQ number. You can also disable the port with this field.

IR Mode

Use this field to make the infrared port comply with the ASK or IrDA standard for infrared communications.

LPT Port

This field lets you assign an address and an interrupt request number for the parallel port on the rear side of your notebook. Leave this value at the default (378, IRQ 7) unless you have a specific reason to change the address and IRQ number. You can also disable the port with this field.

LPT Extended Mode

Use this field to make the parallel port comply with one of the different kinds of parallel communications Standard, Bi-Directional, Enhanced Parallel Port (EPP Mode), or Extended Capabilities Port (ECP Mode).

EPP Version

If you have configured the parallel port for EPP communications, use this field to select EPP mode 1.7 or 1.9.

Pointing Device

If you use a PS/2 mouse connected to the PS/2 port, set the field to *External PS/2 Mouse* to disable the built-in GlidePoint. If you use a serial mouse connected to the serial port, set this field to *Disabled* to disable the built-in GlidePoint.

Keyboard NumLock

If you use the PS/2 port to connect an external keyboard to your notebook, use this field to disable the Num Lock key on the built-in keyboard and avoid conflicts.

Display To TV

If you have used the video out jack to connect your notebook to a TV receiver or other video device, use this field to configure the signal for either the PAL or NTSC format. When this field is disabled, the video hot keys cannot be used to switch the video output to the video out jack.

Resolution Expanded

If you are in DOS mode, or if you are running Windows at a low-resolution display of 640 x 480, the display will not occupy the whole screen. Use this field to expand the display so that it uses the whole of your 800 x 600 built-in screen.

Note: *When you expand a 640 x 480 display to fill the whole screen, it causes some distortion to the screen fonts, and other elements of the display. This is unavoidable, and is not a malfunction of your notebook.*

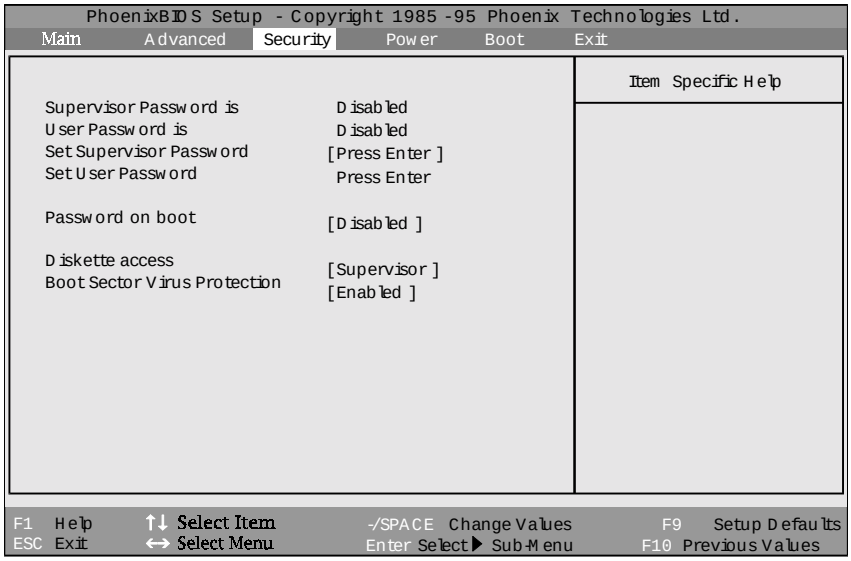
Sound Card Setup

When you highlight *Sound Card* and press **Enter**, the Setup utility will display the sound card sub-menu fields. You can use the first field to turn the sound card on or off. We recommend that you leave the other fields at their default values. They should only need to be changed if they cause a conflict with another device that you have connected to your notebook.

After you have made changes to the sound card sub-menu fields, press **Esc** to return to the Advanced page of Setup.

Making Changes to the Security Page

The Security page lets you install different levels of security protection in your notebook. You can install two levels of security, Supervisor and User, and you can configure your notebook so that the holder of a user password cannot access the floppy disk drive. The illustration below shows the Security page.



Supervisor Password is and **User Password is**

These two fields are for information only. They show if a supervisor password or a user password has been installed.

Set Supervisor Password

Use this field to enter a supervisor password. Press **Enter** to display the Set Supervisor Password window. See the following topic *About Passwords* for information on installing and deleting passwords.

Caution: *If you forget a password, you will be unable to use your notebook. We recommend that you keep a written record of your password in a secure location.*

Set User Password

If you have set a supervisor password, you can then set a lower-level user password. With a user password, you can enter the Setup utility and change or remove the user password. You cannot change or remove the supervisor password, nor enable diskette access if it has been disabled to the user. See the following topic *About Passwords* for information on installing and deleting passwords.

Password on Boot

As a default, you only need a password to access the Setup utility. If you enable this field, you must type in the password every time the notebook is turned on. If you do not type in the correct password, the notebook does not start. If both the supervisor password and the user password is set and this field is set to *Disabled*, the system assumes that the user is booting.

Diskette Access

This field is only available when the supervisor password has been used, or if no passwords have been installed. If you set the value of this field to Supervisor, only the supervisor can use the floppy disk drive.

Boot Sector Virus Protection

This field is only available when the supervisor password has been used, or if no passwords have been installed. When this field is enabled, it provides some protection against computer viruses which try to infect the boot sector of disks.

Caution: *Disable this field before you format the hard disk drive, change the partition structure of your hard disk, or re-install the system.*

About Passwords

Using the password function, you can restrict which users can access the system by entering the correct password. There are two passwords that can be set; a supervisor password, and a user password. The holder of a supervisor password has more access than the holder of a user password, and the supervisor can change the access of the user.

System Start-up Access

If *Password on Boot* is set to enabled, the system cannot be started until the correct password is entered.

Setup Utility Access

The Setup utility cannot be executed if the correct password is not entered. If a user password is used to start the Setup utility, the following fields cannot be accessed or changed.

- Set Supervisor Password
- Diskette Access
- Boot Sector Virus Protection

Floppy Disk Drive Access

If the password protection is enabled, the floppy disk drive access is restricted. If, in the Setup utility, *Diskette Access* is set to *Supervisor*, the floppy disk can only be accessed if the supervisor password was used for system start-up. If set to *User*, the floppy disk can be accessed whether the supervisor password or the user password was used for system start-up.

Caution: *If you forget your password, you will not be able to start or setup the system. Be sure to use a password that you will not forget, or to note it and keep it in a safe place. If three mistakes are made while entering the password at system start-up or when running the Setup utility, SYSTEM DISABLED will be displayed. In that case, turn the notebook off, then on again.*

Setting and Changing the Password

1. Display the Setup utility Security menu.
2. Select the *Set Supervisor Password* field and press the **Enter** key.
3. Type in the supervisor password and press the **Enter** key. When changing the password, type the new supervisor password.
4. For confirmation, type the new supervisor password one more time and press the **Enter** key.
5. Press the **Enter** key. The setting of the item *Supervisor Password is* will change to *Enabled.*

Note: *To set the user password, select the* Set User Password *item, press the* ***Enter*** *key, then follow steps 3 to 5 above to set the password or to change it. The setting of the item* User Password is *will change to* Enabled*. The user password can only be set if the supervisor password has been set.*

Passwords can be any combination of numbers and letters up to a maximum of 7 characters.

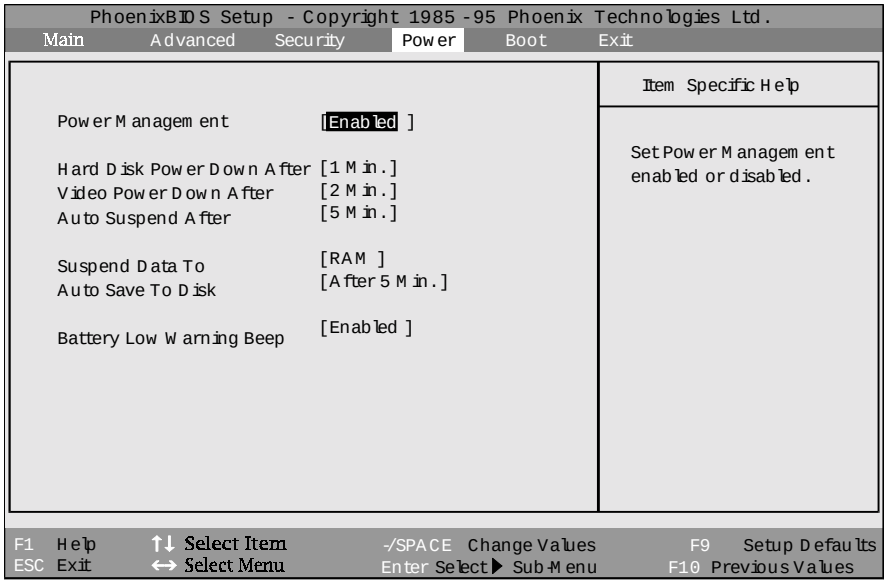
Deleting a Password

Follow the same procedure to set the password, but press the **Enter** key instead of typing a password. The setting of the items *Supervisor Password is* and *User Password is* will change to *Disabled*.

Note: *When the supervisor password is deleted, the user password is automatically deleted.*

Making Changes to the Power Page

The Power page controls the power management routines that your notebook uses to reduce power consumption. The illustration below shows the Power page.



Power Management

This field acts like a master switch for all the other powerdowns. If you disable this field, none of the other system powerdowns will function. Use this field to turn power management on and off.

Hard Disk Power Down After:

This field can be set to *Disabled* or it can specify a timeout from 1 to 15 minutes. If the hard disk drive is not used for the time specified, it will automatically power itself down. When the hard disk is next required, the drive will automatically be re-supplied with power.

Video Power Down After:

This field can be set to *Disabled* or it can specify a timeout from 2 to 15 minutes. If you do not operate the notebook and the screen is not changed for the time specified, the built-in screen turns off. Any keystroke returns power to the screen.

Auto Suspend After:

This field can be set to *Disabled* or it can specify a timeout from 5 to 30 minutes. If the notebook is not used for the time specified, it automatically suspends. The notebook will suspend to disk or RAM, whichever value is selected in the next field *Suspend Data To*. The timeout set in this field will not begin counting until the timeout set in the field *Video Power Down After* has elapsed. If *Video Power Down After* is disabled, *Auto Suspend* begins counting immediately.

Suspend Data To:

This field defines how the system suspends if the hot keys **Fn + F12** are pressed, or if the timeout value in the field above, *Auto Suspend After*, elapses. You can program the notebook to suspend to disk or to RAM.

Auto Save To Disk

If the field *Suspend Data To* is set to *Disk*, this field is not required and it is automatically disabled. If *Suspend Data To* is set to RAM, then you can use this field to program the notebook to automatically suspend to disk, after it has suspended to RAM. The timeout that you install in this field does not start counting until the timeout installed in *Auto Suspend After* has elapsed.

Battery Low Warning Beep

You can use this field to turn on or off the battery low warning beep that the notebook makes when battery power is low.

System Power Management

Your notebook is installed with two kinds of power management. One kind is transparent, and operates automatically. The other kind is user-selectable, and you can use the Power page to program how it operates.

Windows Power Management

Your notebook is designed to use the Windows power management routines to transparently reduce system power consumption. Whenever the processor inside your notebook is idle for a short time, the transparent power manager reduces the clock speed of the processor so that it consumes less power. When the processor resumes working, it returns to full speed almost instantaneously with no loss of performance. This kind of power management is transparent and automatic, and can save a great deal of energy.

Thermal Management

Your notebook monitors the processor's temperature. Before critical temperatures can be generated, your notebook automatically slows down the processor until the heat problem disappears. This procedure only occurs in exceptional conditions. You may notice a slight loss of performance when your notebook takes this course of action.

User-selectable Power Management

In addition to the transparent power management, you can program your notebook to use progressively less and less energy and to eventually shut down altogether if it is ever left idle. You can do this in the Power page of the system Setup utility.

About the Suspend Modes

Your notebook can either suspend to RAM or suspend to disk. The following details how these two modes are different, and when to use one suspend rather than the other.

Suspend to RAM

In a suspend to RAM, the contents of your notebook's memory are held intact, while practically all the rest of the components in your notebook turn off completely, or reduce power consumption to a minimum. In a suspend to RAM, your notebook remains active but with the minimum possible power consumption. You can return the notebook to full power by pressing the **Space Bar.**

If you are operating your notebook on battery power, a fully-charged battery can maintain a suspend to RAM for many hours. The AC adapter can recharge the battery while the notebook is suspended to RAM.

Suspend to Disk

Suspend to disk is really another way of turning your notebook off. When you suspend to disk, the contents of your notebook's memory are copied to your hard disk drive. When the contents of the memory have been safely stored to disk, your notebook turns off. The next time the notebook is turned on after a suspend to disk, the data on the hard disk is quickly read back into memory. In just a few moments, your notebook appears exactly as it was when you last suspended to disk.

Suspend to disk is very useful for Windows users who like to have many different programs open and iconized on the Windows desktop. It can take quite a few minutes to get a busy Windows desktop up and running, and then you have to shut down each program one by one when you want to turn your notebook off. With *Suspend Data To* set to *Disk* in Setup, you can simply press the suspend hot keys and your custom Windows environment is saved to disk.

Suspend-to-disk Partition

In order to suspend to disk, you must have a special suspend-to-disk partition on your hard disk drive. This partition must be created on your hard disk drive before you begin installing your notebook's software.

Your notebook is pre-installed with a suspend-to-disk partition with a capacity of 51 MB. This is large enough to support a suspend to disk when the notebook is installed with 48 MB of memory or less. If you happen to destroy this partition, you will need to create a new suspend-to-disk partition. See the instructions in the *Re-installation Instructions*.

Entering Suspend Mode

Your notebook will enter suspend mode under the following conditions:

- If the time you set in *Auto Suspend After* has passed with no activity.
- If the time you set in *Auto Save to Disk* has passed with no activity.
- If the display panel is closed.
- If the suspend hot keys **Fn + F12** are pressed.
- If Suspend is selected in the Windows Start menu.

Caution: *Never close the display panel while your notebook is resuming from the suspend mode.*

Resuming from Suspend Mode

To resume from the suspend to RAM mode, press the **Space Bar**.
To resume from the suspend to disk mode, turn on the notebook. When you resume from a suspend to disk mode, your notebook will restore to memory the exact state that your notebook was in when it was suspended.

Caution: *Do not touch the keyboard, GlidePoint, mouse, etc., while the notebook is entering or resuming from the suspend mode, as that may cause a malfunction. Do not let your notebook enter the suspend mode in the following conditions:*

- *The system is playing or recording audio, photos, etc.*
- *The system is operating peripheral devices such as a printer.*

Conditions that Prohibit Suspend Modes

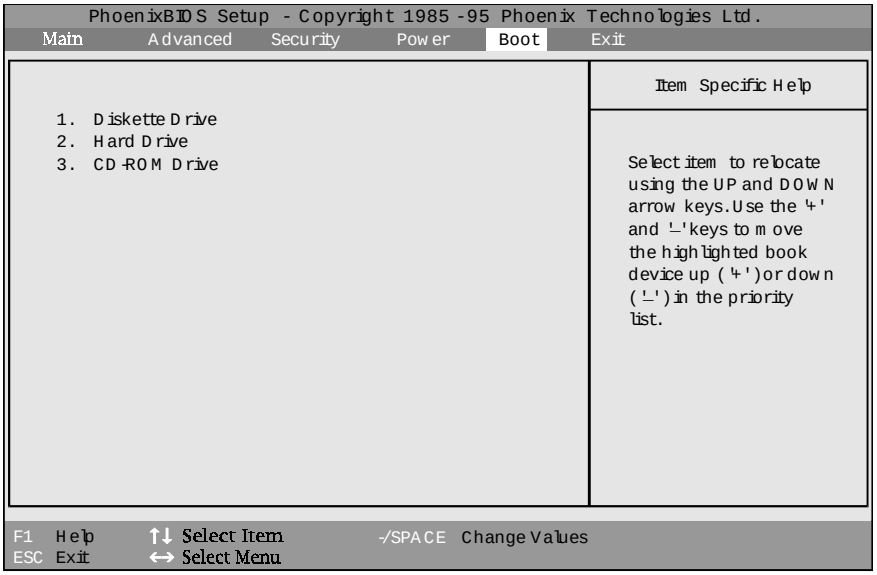
Your notebook will not enter suspend mode under the following conditions:

- The Power setting in Windows 95 is not set to manage power use on this computer.
- Windows 95 displays the clock.
- An application that periodically writes to the screen is running on your notebook.
- The item *Enable infrared communication on* in the Infrared Monitor is checked. You can see its status by selecting the *Options* tab of *Control Panel - Infrared Options.*
- The *Disk Drives* of *Power Properties* in Windows 95 are checked.
- The item *Disable in this hardware profile* in the dialog box of *Built-in infrared port on laptop or desktop Properties* is unchecked. You can see its status by selecting *Control Panel - System - Device Manager - Infrared - Built-in infrared port on laptop or desktop Properties - General.*

These are valid conditions for prohibiting the suspend mode. If you feel that your notebook is not suspending correctly, please check that the conditions noted above are not the cause.

Making Changes to the Boot Page

The Boot page of the Setup utility is a numbered list which defines the order in which the notebook will try to load (boot) an operating system each time the system is turned on. In the default condition, the Boot page appears like the illustration below.


PhoenixBIOS Setup - Copyright 1985-95 Phoenix Technologies Ltd.
Main
Advanced
Security
Power
Boot
Exit
1. Diskette Drive
2. Hard Drive
3. CD-ROM Drive
Item Specific Help
Select item to relocate using the UP and DOWN arrow keys. Use the '+' and '-' keys to move the highlighted book device up ('+') or down ('-') in the priority list.
F1 Help
ESC Exit
↑↓ Select Item
↔ Select Menu
-/SPACE Change Values

You can change the order of priority of the Boot page by highlighting one of the items and then pressing the **Space Bar**. Each press advances the item one space up the list. If you ever need to boot from a bootable CD-ROM disc, you can use this item to advance the CD-ROM drive to the number one position in the list.

CHAPTER 4

Using the Notebook

This chapter shows you the basic operations of your notebook. The main subjects covered are the power supply, the floppy disk drive, the hard disk drive, the CD-ROM drive, the fax/modem (US & Canada only) (PC-9300T only), the GlidePoint, using PC cards in the PC card slots, and the IR port.

Power Supply

The notebook can be powered by one of the following methods.

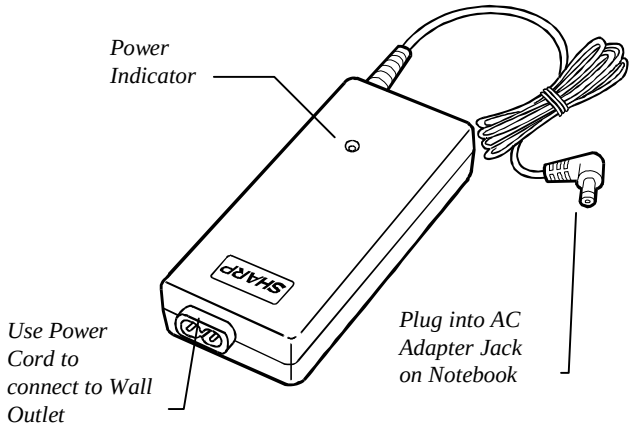
- From an AC wall outlet.
- From the battery pack.

Note: *Use the AC adapter whenever possible. Use the battery pack only when an AC wall outlet is not available.*

Using the AC Adapter

The AC adapter converts the AC power from a wall outlet into a DC current that can be used by the notebook. The AC adapter can use wall outlets with voltages ranging from 100V up to 250V. To power the notebook, connect the output cable from the adapter to the AC adapter jack on the rear side of the notebook. Then use the power cord supplied to connect the adapter to a wall outlet.

Note: *For more information on how to connect the AC adapter and for warnings regarding its use, please refer to the topic* Connecting the AC Adapter *in Chapter 2.*



Using the Battery Pack

When a wall outlet is not available, you can use the rechargeable battery pack to power your notebook. When you are using the battery pack to power your notebook for a long time, we recommend that you enable the automatic suspend to disk function of the system's *Power Management*, according to the steps below. See *System Power Management* in Chapter 3 for more details.

1. Turn on the notebook.
2. As soon as you see the message "*Press <F2> to enter SETUP*", press **F2** to display the Setup utility.
3. In the *Power* page of the Setup utility, change the value of the field *Power Management* to *Enabled*, and then change the value of the field *Auto Save to Disk* to *After 5 Min.* (This assumes that the field *Suspend Data To* is set to *RAM*.)
4. Press the **Esc** key; and then press the **Enter** key twice to restart your notebook under the new power management settings.

When it is fully charged, a standard battery pack can power the notebook for about 2 hours. The duration depends on the condition of the battery, and on usage and the options that are installed in your notebook.

Recharging the Battery

Whenever your notebook is connected to a wall outlet through the AC adapter, the battery will automatically begin charging if it is less than fully charged. The battery charge indicator will turn on with an amber color to indicate that the battery is being charged.

If your notebook is turned off, it will take about 4 hours to completely recharge an empty battery pack. If your notebook is in the suspend to RAM mode, it will take about 6 hours to completely recharge an empty battery pack. When the battery pack is fully charged, the battery charge indicator will change from an amber color to a green color.

Battery Low Indications

When the battery level is low and only a few minutes of power are left, the battery charge indicator will begin to flash off and on with a red color, and the notebook will begin to emit an audible beep.

The calibration of the battery low level assumes that the notebook is running normally and no peripheral components are turned on. If, however, you are running many components, such as the sound system, the PC card slots, the CD-ROM drive, and so on, you might have much less than a couple of minutes power remaining when the battery low indications turn on.

Therefore when the battery low indications begin, you should immediately save your work and either:

- close all the applications that are open and then shut down the notebook
- suspend the notebook to disk

After the notebook has been turned off or suspended to disk due to a low battery, you cannot restart the notebook until you have either connected the AC adapter to a wall outlet, or replaced the low battery with a fresh, charged battery.

Note: *If the notebook is in suspend to RAM mode when the battery low level is reached, the notebook will automatically turn off instead of suspending.*

Initializing the Battery

The battery installed in your notebook has the ability to accurately monitor the amount of charge held by the battery and relay the information to the "battery meter" in your notebook. If you ever replace the internal battery with a new one, or if you feel that the Windows battery meter is not measuring the battery charge accurately, you must initialize the battery so that the "battery meter" in Windows 95 is calibrated correctly.

1. Turn on the notebook and enter the Setup utility by pressing the **F2** key at the prompt.
2. Disconnect the AC adapter and leave the notebook turned on until the battery is empty and the notebook shuts down.
3. Connect the AC adapter until the battery is fully charged. While the battery is being charged, the battery charge indicator turns on with an amber color, and when fully charged, the battery charge indicator changes to a green color.
4. Repeat steps 2 and 3 to fully discharge and recharge the battery once more. The battery is now initialized. The Windows battery meter is accurately calibrated with the charge potential of your battery.

Caution: *Do not connect the AC adapter to your notebook during the discharging of the battery. This will cancel the initialization of the battery.*

Battery Condition

Your battery pack will store more charge if you keep it in good condition. To maintain good battery condition, it helps if you can frequently discharge the battery until it is completely empty, and then recharge the battery until it is completely full. This procedure ensures that the battery stores a maximum charge.

The condition of the battery pack will deteriorate over time. After 2 or 3 hundred cycles of charging and discharging the battery, you may notice that it begins to store less charge. When this happens, you might consider replacing the original battery pack with a new battery pack (CE-M50EB).

Storing and Retrieving Data

One of the most important functions of any kind of computer is to store data, and retrieve data that has been stored or recorded. Your notebook is very versatile and it can store and retrieve data from many different kinds of media.

Floppy Disk Drive

The floppy disk drive can read and write to 3.5" disks which can store either 720K (2DD disks) or 1.44MB (2HD disks) of data. The floppy disk drive in your notebook is normally identified as drive A.

Hard Disk Drive

Your notebook is installed with a hard disk drive, which can store more than 1 GB of data. Access to the hard disk drive is very fast. Your notebook identifies the hard disk drive as drive C. The hard disk drive in your notebook is pre-installed with many software titles so that your notebook is ready for action as soon as you take it out of the box.

To prevent damaging the hard disk and to protect the data on the disk, see the points below:

- Do not turn the power off or reboot the notebook while the hard disk indicator lamp is turned on.

- Do not drop the notebook or submit it to strong shocks.

CD-ROM Drive

Your notebook is installed with a CD-ROM drive. CD-ROM discs can be used to store data, video or audio files, and software applications. The discs are not erasable but they store a tremendous amount of data so they are ideal for distributing long files.

Compact Disc Maintenance

If the recorded side is dirty, wipe the disc, from the center out to the edge, with a dry soft cloth. If it is wiped in the opposite direction (from the edge towards the center) or in a circular direction, you may damage the disc. Never use the following products on a disc:

- Alcohol, benzene, thinner or other cleaning solvents
- Cleaning fluids containing abrasives
- Sprays or cleaners for vinyl discs
- Anti-static products

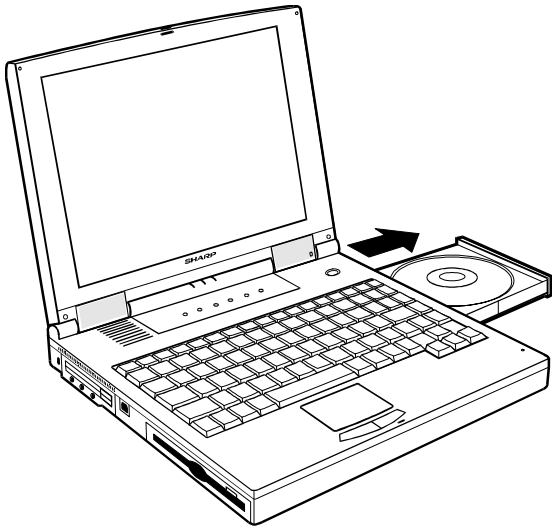
Using the CD-ROM Drive

Your notebook is installed with a special software application named Sharp Player. Sharp Player lets you operate the CD-ROM interactively by pointing and clicking on the user-friendly interface. You can consult the online help that is provided with Sharp Player for information on using the program.

Caution: *If you are using the CD-ROM drive, we recommend that you disable the power management routines in your notebook. The power management can interfere with the transmission of data so that audio or video files don't run smoothly.*

Inserting a CD

1. Turn on your notebook.
2. Press the eject button and the disc tray will open slightly.
3. Carefully pull the tray fully open.



4. Place the disc in the tray with the printed side facing up.
5. Push down the disc lightly. A click sound can be heard when the disc is correctly installed.
6. Carefully push the disc tray back into the notebook until it clicks and locks closed.

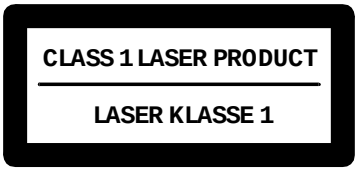
Caution: *Do not leave the disc tray opened if it's not in use. Never touch the lens with your fingers as it can be damaged by dust or fingerprints. Only clean a dirty lens with a clean, lint-free swab that does not leave a residue on the lens.*

Ejecting a CD

1. Turn on your notebook.
2. Press the eject button and the tray will open slightly.
3. Carefully pull the disc tray fully open.
4. Remove the disc from the tray.
5. Carefully push the disc tray back into the notebook until it clicks and locks closed.

Caution: *When the tray is opened, the disc might still be spinning. In this case, please wait until the disc stops before removing it. Do not eject a disc when the CD-ROM icon shows that the disc is still being accessed by the notebook.*

Maximum output and wavelength of the laser: 4.3mW, 780nm



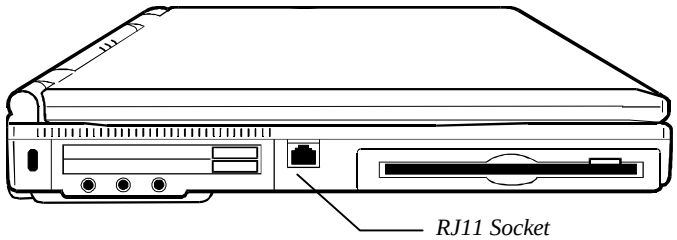
Using the Fax/modem (US & Canada only) (PC-9300T only)

The fax/modem is an internal component that is built into your notebook. The fax/modem can transmit and receive data at up to 33.6 Kbps, and can send and receive faxes at up to 14.4 Kbps. Your notebook is installed with a communications utility called SuperVoice. The SuperVoice software integrates the fax/modem with your notebook's audio system so that you can install TAM (telephone answering machine) functions into your notebook.

For example, you can turn your notebook into a speakerphone, so that the notebook speakers output the incoming call, and the microphone acts as a telephone mouthpiece. You can install your notebook with voice mail so that incoming messages are stored as audio files while you are absent.

Connecting the Fax/modem

On the left side of your notebook there is an RJ11 (telephone) socket. This socket is connected to the internal fax/modem. In order to use your fax/modem, you must connect a working telephone cable into the RJ11 socket. A telephone cable, with RJ11 plugs at either end is supplied with your notebook.



After you have connected the telephone cable, click on the Windows *Start* button, and then click on the *SuperVoice* icon in the *Programs* list. Follow the instructions in the SuperVoice online help, to install the features that you want to operate on your fax/modem.

GlidePoint

The pointing device built into your notebook is called a GlidePoint. The GlidePoint is a PS/2 device that functions just like a mouse and is compatible with a PS/2 mouse. You can use the GlidePoint to start, stop, and control operations in the Windows environment by pointing and clicking, and dragging and dropping.

Caution: *Do not hit or scratch the GlidePoint pad surface with a sharp object, such as the point of a pen or pencil. Do not use the GlidePoint if your fingers are wet or damp. These actions may cause improper operation.*

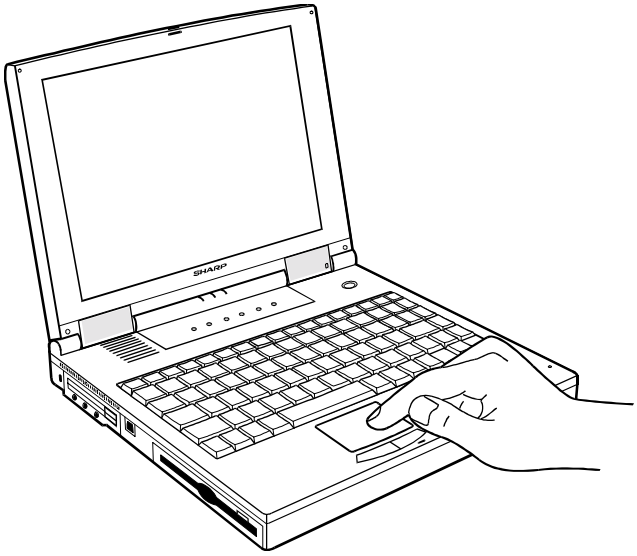
Note: *To clean the GlidePoint, first turn off the notebook; then wipe the surface with a dry soft cloth.*

Using the GlidePoint

The GlidePoint consists of a GlidePoint surface and two buttons. The surface acts as a representation of the notebook display.

Moving the Cursor

When you slide a fingertip across the GlidePoint surface, the cursor on the display moves in the same direction across the display.



Clicking the Buttons

The two buttons in front of the GlidePoint are used like the left and right buttons on a standard mouse. Press or double-press a button to execute a left or right mouse click or double-click. You can also simulate a button click by lightly tapping once on the GlidePoint surface, or twice for a double-click.

Using an Alternative Device

Optionally, you can connect an external pointing device to your notebook through the PS/2 port or the serial port. You can use the Advanced page in the Setup utility to disable the built-in GlidePoint if you prefer. It is not necessary, however, to disable the GlidePoint even when you have connected a PS/2 mouse.

PC Card Slots

The left hand side of your notebook is equipped with a PC card compartment. The compartment contains two Type-II slots stacked one on top of the other, or one Type-III slot (using the lower slot only). You can install these slots with PC cards that can add different kinds of features or functions to your notebook.

LAN Adapter Card

This kind of card lets your notebook connect to a Local Area Network.

SCSI Interface Card

This kind of card gives your notebook a SCSI interface so that you can add SCSI devices to your system.

ATA Device

Used for rotating or solid state large storage capacity devices equipped with an AT attachment such as an IDE hard disk. The ATA device does not require an external power supply to keep the data stored even after it is removed from the slot.

SRAM Memory Card

A Static RAM memory card can be formatted like a floppy disk, and it comes with a write-protection switch on its edge. The card has an internal battery to maintain the data stored on the card after it is removed from the slot.

ZV Cards

ZV (Zoomed Video) cards are cards that adhere to the Zoomed Video specification which allows for fast video access to the system. The lower slot supports ZV cards, so a ZV card must always be inserted into the lower slot.

Note: *A ZV card or some cards need ZV-port compliant PC card drivers, while other cards may not work if this driver is installed. For further instructions, see the* Re-installation Instructions.

FLASH Memory Card

A solid state storage device similar to a floppy disk, which has a switch on its edge to protect the stored data. Unlike SRAM cards, a FLASH memory card does not need an internal battery to maintain the data stored on the card.

Note: *Your notebook can use only the FLASH memory cards usable as ATA devices.*

Inserting and Removing PC Cards

PC cards can be inserted and removed just like a floppy disk.

Type-II cards:
Can be used in the upper or lower slot. You can insert two Type-II cards in your notebook at the same time.

Type-III cards:
Can only be used in the lower slot. When a Type-III card is installed, the upper slot cannot be used.

ZV Cards:
Can only be used in the lower slot which has an integrated Zoomed Video port.

Note: *Memory cards or ATA cards must be formatted before they can be used to store data.*

Inserting PC Cards

1. The label on the PC card is normally placed on the upper side of the card. Align the PC card with the slot, and carefully insert the card all the way into the slot until you feel it engage with the connector inside the slot.
2. If your notebook emits a double beep, this means that your notebook has successfully recognized and configured the card. If your notebook emits a single beep, this means that it has been unable to recognize and configure the card.

Note: *Some PC cards need to use resources such as Interrupt Requests (IRQs) and I/O Addresses. These resources are limited and many of these resources are required by other components in your notebook. You can examine the resources used by your notebook by opening the* Control Panel *and clicking on the* System *icon. Click on the* Device Manager *tab to show a list of the devices installed in your notebook. Click on the* Properties *button to show the resources used by a highlighted device.*

Ejecting PC Cards

1. From the *Start* menu, select *Settings - Control Panel*.
2. Click the PC card icon.
3. Select the card you want to remove, and click *Stop*.
4. When the message *This device can be safely removed* is displayed, click on the *OK* button.
5. Pull out the card slot eject button, then push it in to eject the PC card. Slide the card all the way out of the PC card slot.

Caution: *Some PC cards may become a little hot if they have been in use for a long time. Be careful when removing such cards.*

Installing PC Card Drivers

Normally, when a PC card is inserted into the PC card slot, Windows 95 will recognize the card, and install the appropriate driver so that your notebook can use the card.

If Windows 95 cannot recognize a card and install the appropriate driver, it will display a dialog box so that you can manually instruct Windows what kind of PC card driver is required. Follow the instructions that are displayed by Windows.

Windows may completely fail to recognize some ATA devices (for example, a hard disk drive). You might have to take the following actions to fix the problem.

1. Eject the PC card.
2. Click on the *Start* button and then select *Control Panel* from the *Settings* menu.
3. Double click on the *System* icon, and then click on the *Device Manager* tab.
4. Double click on *Hard Disk Controller*.
5. Remove the registered controller.
6. Insert the PC card ejected at step (1).
7. Double click on *Hard Disk Controller*.
8. Double click on the newly installed controller to install it.
9. Select *Resources*. Remove the check mark from the *Use automatic settings*, and change *Settings based on* to *Basic configuration 0002* or over, in which you can edit *Input/Output Range*.

10. Select *Input/Output Range* in the *Resource* settings and click on the *Changing Setting* button.
11. Select the value between 0100 and 03A0 by pressing the σ or τ button so that the conflicts information indicates *No conflicts*.
12. Click on the *OK* button twice and then click on the *YES* button.

Setting the COM Port

Some PC cards use the COM3 or COM4 port address. The COM1 and COM2 ports of your notebook are already used by other devices, and COM3 or COM4 may conflict with those ports.

When a PC card uses the COM3 port address, go to the Advanced page of the Setup utility and disable the field *COM 1 Port*.

When a PC card uses the COM4 port address, go to the Advanced page of the Setup utility and disable the field *COM 2 Port (For IR).*

Infrared Communications

The IR port on the right side of the notebook lets you communicate with wireless LAN ports, and other devices equipped with an IR port such as printers, notebooks, and electronic organizers.

Positioning and Preparing the Notebook and the Target Device

Before you establish wireless communication, both the notebook and the target device should be properly positioned. Locate your notebook on a flat surface and then place the target device so that the IR ports of the notebook and target are in line and within approximately 30 inches (80 cm) of each other. You should also refer to the target device's manual to prepare it for IR communication.

Note: *When communicating with a Sharp electronic organizer, make sure the IR ports are no more than 15 inches (40 cm) apart.*

Sharp Import/Export

Sharp Import/Export facilitates ASK-compatible IR data communications. Refer to the *Sharp Import/Export User's Guide* provided with the notebook for details.

TranXit

The *TranXit* utility facilitates IrDA-compatible IR data communications. Refer to the *TranXit Quick Reference Guide* provided with the notebook for details.

Note: *Make sure that the* Infrared Monitor *is disabled before using* TranXit*. To disable the* Infrared Monitor*, double-click the* Infrared *icon in the* Control Panel*, and then click the* Options *tab. Clear the check box for the item* Enable infrared communication on *and press the* OK *button.*

Infrared Monitor

The Infrared Monitor controls the IR port in compliance with the Infrared Data Association (IrDA). Although the physical IR port on your notebook is assigned to COM2, the Infrared Monitor assigns the logical IR port to COM4 as a default for Windows 95 communication applications such as Direct Cable Connection. It also assigns the logical printer port to LPT3 as a default for printers which support IR communications. When you run Windows 95 applications using the IR port, select the logical IR ports COM4 and LPT3 as defaults.

CHAPTER 5

System Expansion

In this chapter you will find instructions on how to expand your notebook by connecting it to peripheral devices such as a printer, an external monitor, and so on.

Installation Safety Precautions

The parts and components of this notebook can be damaged by static electricity. When handling or connecting components, please follow the precautions below.

- Before connecting any device for system expansion, make sure the notebook is turned off.
- Memory modules have exposed circuit boards. Never touch the surface of the circuit boards. When the devices are removed from their anti-static packaging, place them carefully on a static-free surface.

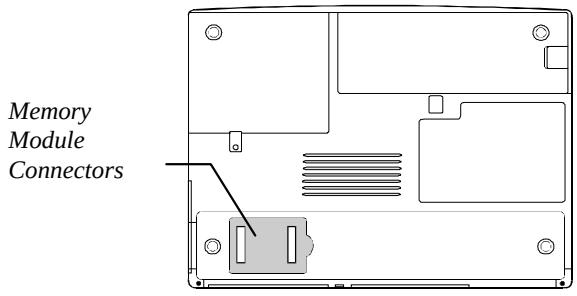
Installing a Memory Module

Your notebook comes with 16 MB of memory pre-installed. If you want to expand the memory size, you can install any of the following modules; 8 MB (CE-A311B), 16 MB (CE-A312B), or 32 MB (CE-A323B).

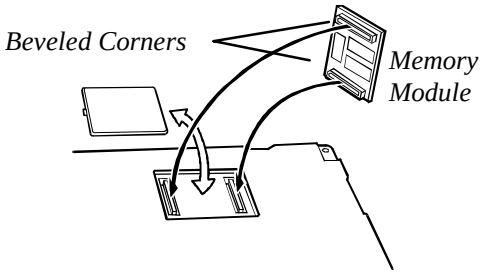
A memory module can be installed in the memory compartment in the base of the notebook. You can install the memory module quite easily.

Follow the steps below to install a memory module. Please refer also to the *Installation Safety Precautions* at the beginning of this chapter.

1. Turn off the notebook and disconnect the AC adapter.
2. Turn the notebook over and place it on a flat surface.
3. Locate the memory compartment. Remove the cover of the compartment by carefully levering the cover upwards.
4. There are two vertical connectors inside the memory compartment and two connectors on the base of the memory module. You will notice that one corner of the module connectors is beveled. When you turn the module over to install it, the beveled corner of the connector is nearest to the back side of the notebook.



5. Align the memory module properly according to step 4 and carefully install the memory module into the compartment. Press the module down quite firmly to ensure that it is seated correctly in the compartment.
6. Replace the compartment cover and restart your notebook. The notebook automatically registers and uses the new memory.

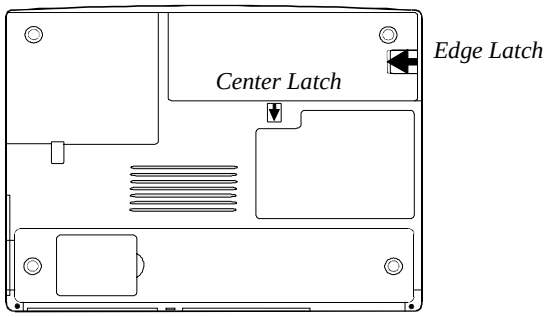


Changing the Battery

If you frequently operate your notebook using battery power, we recommend that you purchase a spare battery pack (CE-M50EB). If you carry two charged battery packs, you can count on more than four hours autonomous operation from your notebook.

Caution: *Always make sure that the battery pack is correctly installed. Damaged or incorrectly installed batteries can be hazardous. Never attempt to use any other battery pack than the approved battery (CE-M50EB).*

1. Turn off the notebook.
2. Close the screen cover and turn the notebook over.
3. Locate the center latch and the edge latch that secure the battery pack in the base of the notebook.
4. Slide the center latch back outwards, and then slide the edge latch away from the side of the notebook.

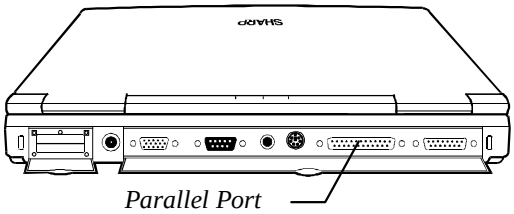


5. Use the gap created by sliding the edge latch open to raise the outer edge of the battery pack out of the battery compartment.
6. You can then remove the battery completely.
7. Install the replacement battery back and ensure that the center and edge latches are engaged, and the battery is secure.

Using the Parallel Port

Follow the steps below to connect a printer, or other parallel device, to your notebook.

1. Turn off the notebook and pull down the cover on the back side of the notebook.
2. Connect the printer cable to the parallel port in the connector compartment.
3. Restart your notebook.

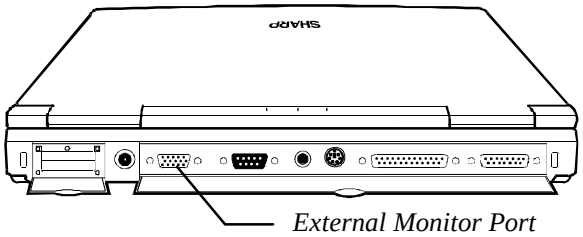


1. If you want to change the parameters of the parallel port, for example, if you are using a device which supports an Enhanced Parallel Port (EPP) or an Extended Capabilities Port (ECP), restart your notebook and press **F2** to run the Setup utility. In the Advanced page of the utility, you can change the way the parallel port operates.

Using the External Monitor Port

Follow the steps below to connect an external Super VGA monitor to your notebook.

1. Turn off the notebook and pull down the connector compartment cover on the back edge of the notebook.
3. Connect the video signal cable to the external monitor port in the connector compartment.



3. Plug the monitor power cable into a wall outlet. Turn on the monitor and then turn on the notebook.

Switching the Video Display

You can switch the video output of the notebook from the built-in screen to the external monitor port, the video out jack, or even a simultaneous display on the screen and a monitor connected to the external monitor port. You can switch the display with software (using the *Display Device* utility) or with hardware, using the display hot keys. We recommend that you use software when you are switching the display to new devices. If you regularly use the same device, you can use the display hot keys after you have established that the video switches to the device without problems.

Switching the Video with Software

1. From the *Start* menu, Click on *Settings-Control Panel*.
2. Double click on the *Display* icon.
3. Click the *Display Device* tab

- In the *TV Standard* area, you can define the TV receiver to be either PAL or NTSC format.
- In the *Display Device* area, you can direct the video to a CRT, to a TV, to an LCD (liquid crystal display, i.e. the built-in screen), or a simultaneous display to the CRT and LCD. You can also define the number of colors in the video display, according to the capabilities of the display device.
- In the *External Display Detection* area, your notebook can display information on any external video devices that it detects.

Switching the Video with Hot Keys

You can switch the video display by pressing the video hot keys **Fn + F5**. Each press of these keys cycles the video through four options.

	Ext. Monitor (LCD + CRT)	**TV Receiver (LCD + TV)**	**Ext. Monitor & TV Receiver (LCD + CRT + TV)**
Start-up Display	LCD + CRT	LCD	LCD + CRT
First Press	LCD	No Display	LCD
Second Press	CRT	*TV	CRT
Third Press	CRT **Note 1**	LCD	TV (& CRT) **Note 1**
Fourth Press (Return to First)	LCD + CRT	LCD	LCD + CRT

* This display only occurs if you have *Enabled* the field *Display to TV* in the Advanced page of the Setup utility.

Note 1: If the field *Display to TV* is *Disabled*, this key press is omitted. If the field *Display to TV* is *Enabled*, the display on the external monitor will change to the resolution of a TV display.

Note: *When using both the LCD and the external monitor at the same time, the external monitor should have 800x600 resolution capability. Some external monitors which support only 640x480 resolution do not work properly. We recommend that you use software to switch the display.*

Resolution and Number of Colors Displayed

You can change the resolution and the number of colors displayed as follows:

1. From the *Start* menu, click on *Settings-Control Panel.*
2. Double-click on the *Display* icon.
3. Click the *Settings* tab.
4. Select the number of colors from *Color palette*, and the resolution from *Desktop area*.

Note: *The number of colors in each setting is as follows:*
High Color (16 bits) 65,536 colors
True Color (24 bits) 16,770,000 colors
If you set to True Color (24 bits) in Color palette:

- *The drawing speed may be a little slow*
- *There may be some distortion on the screen when displaying video or animation*
- *You cannot display video when using a ZV card compliant PC card.*

The following table shows the resolution and the number of colors displayed on each display device:

Resolution	**LCD**	**CRT**	**TV**	**LCD & CRT (*2)**
640 x 480	256 65,536 16,770,000 (*1)	256 65,536 16,770,000	256	256 65,536 16,770,000 (*3)
800 x 600	256 65,536 16,770,000 (*1)	256 65,536 16,770,000	-	256 65,536 16,770,000 (*3)
1024 x 768	-	256 65,536	-	-
1280 x 1024	-	256	-	-
1600 x 1200	-	256	-	-

(*1) The number of colors is set to 16,770,000, but the actual number of colors displayed is 260,000 in PC-9300T and 220,000 in PC-9300D.

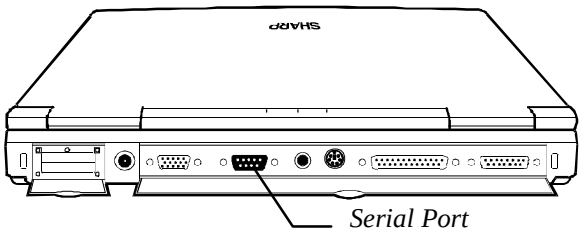
(*2) For simultaneous display, use a monitor with more than 800 x 600 resolution capability. A monitor of only 640 x 480 resolution cannot display simultaneously.

(*3) Actual number of colors displayed is 260,000 (PC-9300T) or 220,000 (PC-9300D) on the built-in display, and 16,770,000 on an external monitor.

Using the RS-232C Serial Port

Follow the steps below to connect a serial device to your notebook.

1. Turn off the notebook and pull down the connector compartment cover on the back side of the notebook.
2. Connect the serial data cable to the RS-232C serial port in the connector compartment.

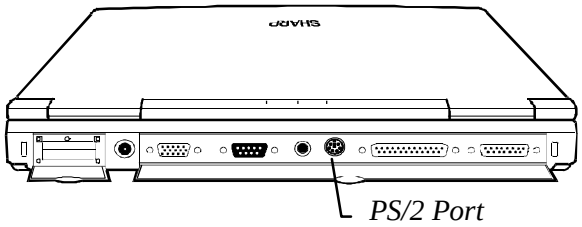


3. Restart your notebook and, if required, supply power to the serial device.
4. You might have to install and configure software in order to use a device that is connected to the RS-232C serial port. You might need the information that your notebook identifies the serial port as COM1.
5. As a default, the COM1 port of your notebook is disabled. In order to use this port, enter the Advanced page of the Setup utility and set the *COM 1 Port* field appropriately.

Using the PS/2 Port

Follow the steps below to connect a PS/2 device, such as a keyboard or a mouse, to your notebook.

1. Turn off the notebook and pull down the connector compartment cover on the back side of the notebook.
2. Connect the PS/2 plug into the PS/2 port.

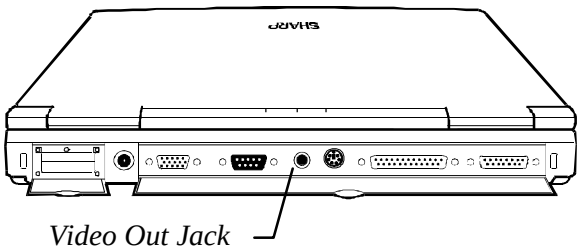


3. Restart your notebook.
4. If you have connected a pointing device such as a mouse or a trackball, you can (optionally) press **F2** to run the Setup utility and use the item *Pointing Device* in the Advanced page to disable the built-in GlidePoint. Your notebook will continue to function normally even if you have connected an external pointing device and the Glidepoint is not disabled.
5. If you have connected an external keyboard, the built-in keyboard will still continue to be active. Optionally, you can press **F2** to run the Setup utility and use the *Keyboard Num Lock* item in the Advanced page to disable the function of the **Num Lock** key on the built-in keyboard. This will prevent conflicts with the use of the **Num Lock** key on the external keyboard.

Using the Video Out Jack

Use the video out jack to send the video generated by your notebook to an external video device such as a TV receiver or a video cassette recorder.

1. Turn off the notebook and peripheral devices.
2. Using a standard audio/TV cable, connect your notebook to a TV receiver or a video device. For information on making the connection, refer to the instructions supplied with the audio/TV cable.

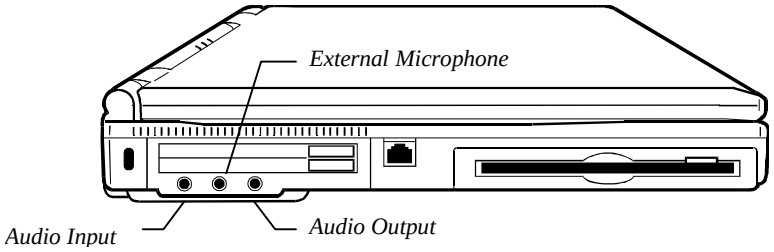


3. Turn on the TV receiver or video device, and then turn on the notebook. When the setup prompt appears, press **F2** to run the Setup utility.
4. In the Advanced page of the Setup utility, set the field *Display to TV* to *NTSC* or *PAL*.
5. Set the TV receiver to video display mode.
6. From the Windows *Start* menu, select *Settings*, and then click on *Control Panel*. Double-click on the *Display* icon and then click on the *Display Device* tab.
7. In the *Display Device* window, check the item marked TV, and check the item marked NTSC. The system will immediately send the video output to the TV receiver using a resolution of 640 x 480. If the results are satisfactory, click on the OK button to close the *Display Device* window.
8. When you want to return the display to the built-in screen (or an external monitor), follow the steps above to open the *Display Device* window and remove the check from the TV item. Check either the LCD or the CRT item according to where you want to display the video.

Note: *Some interference may occur when small characters are being displayed on the TV.*

Using the Audio Ports

You can output the sound generated by your notebook to external audio devices and you can use external devices to input sound into your notebook.



Audio Input Jack

Use this jack to plug in an external audio source such as a radio or a tape recorder.

External Microphone Jack

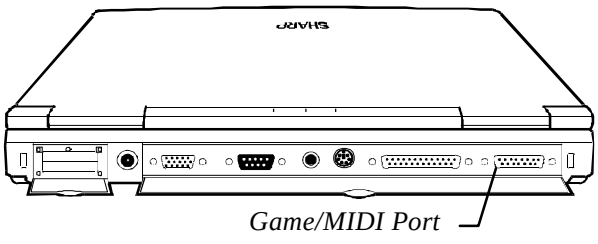
Use this jack to plug an external microphone into your notebook. When you use this jack, the built-in microphone is disabled.

Audio Output Jack

Use this jack to output the notebook sound to an external audio device such as headphones or speakers. When you use this jack, the built-in speakers are disabled.

Using the Game/MIDI Port

You can connect a joystick or a MIDI device to the Game/MIDI port.



Setting a Joystick

1. From the Windows Start menu, click on *Settings-Control Panel*.
2. Double-click the *Joystick* icon.
3. Set the properties appropriately.

Setting a MIDI Device

In order to use a MIDI device connected to the Game/MIDI port, follow the instructions below.

1. From the Windows *Start* menu, click on *Settings-Control Panel*.
2. Double click the *Multimedia* icon.
3. Click the *MIDI* tab.
4. Select *Single Instrument* and *External MIDI Port*, then click OK.
5. Close the *Control Panel*.

Appendixes

The appendixes include useful information on maintaining your notebook, using the software, the connector pin assignments, and so on.

Appendix A: System Maintenance

This appendix tells you how to look after your notebook to ensure problem-free operation and maximum life.

Taking the Notebook on the Road

Your notebook has been designed to be highly portable. To prevent the risk of problems when taking the notebook on the road, please follow the advice below.

- Before going out, back-up the data from the hard disk onto floppy disks.
- For complete security, carry a copy of the backed-up data with you, and also copies of the original software.
- Do not leave a compact disc in the CD-ROM drive when you are transporting the notebook.
- Do not leave a floppy disk in the floppy disk drive when you are transporting the notebook.
- Do not leave the notebook turned on when you are transporting the notebook. This may damage the hard disk drive, or the data on the hard disk.
- Disconnect the AC adapter from the notebook when you are transporting it.
- If possible, carry a fully-charged spare battery pack. Always carry the AC adapter.
- When you are transporting the notebook, avoid subjecting it to excessive shocks.

Cleaning the Notebook

Cleaning the Case

The plastic case of the notebook can be cleaned with a soft, dry cloth.

Note: *Do not use cleaning products that contain solvents such as alcohol, benzene or thinner as they may damage the notebook case. Turn off the notebook before cleaning it.*

Cleaning the Display

To clean the display, wipe it with a soft cloth that has been dipped in a mild detergent solution and then thoroughly squeezed dry.

Cleaning the IR Port (Infrared Port)

If the IR port is dirty, wipe it clean with a soft, dry cloth. A dirty IR port may cause communication problems.

Cleaning the GlidePoint

The GlidePoint surface can be cleaned with a soft, dry cloth.

Appendix B: Notes on Software

This appendix contains important notes on some of the software applications and utility programs that have been pre-installed on your notebook.

About the Suspend-to-disk Partition

The suspend-to-disk partition is an area on the hard disk drive that is reserved for the suspend-to-disk function. The suspend-to-disk function is a special way of turning off the notebook.

When the notebook is suspended to disk, the contents of the system memory are copied to the suspend-to-disk partition, and then the notebook turns off. When the notebook is turned back on, the data in the suspend-to-disk partition is copied back into system memory. In just a few seconds after power on, the notebook appears exactly as it was when it was suspended to disk.

The suspend-to-disk partition must have a capacity that is 3 MB larger than the total memory installed in the notebook (the extra 3 MB are required by the notebook's video memory). In the standard configuration, the notebook is installed with a 51 MB suspend-to-disk partition. This partition supports the suspend-to-disk function for all memory configurations of your notebook (up to 48 MB).

Changing the Suspend-to-disk Partition Size

The suspend-to-disk partition size should be 3 MB bigger than the installed memory. The table below shows the minimum size of the suspend-to-disk partition that is required for different memory installations. The suspend-to-disk partition is expressed in kilobytes (1 megabyte equals 1024 kilobytes) since this is the figure you need when you use the PHDISK utility to create the new partition.

Installed Memory	Suspend-to-disk Partition
16 MB	19456 KB
24 MB	27648 KB
32 MB	35840 KB
48 MB	* 52224 KB

- Size of the factory default suspend-to-disk partition

To create a new suspend-to-disk partition, see the following steps in the *Re-installation Instructions.*

- Backing up the data
- Changing values in the Setup Utility
- Deleting the suspend-to-disk partition
- Deleting the DOS partition or Logical DOS Drives
- Creating the suspend-to-disk partition

Memory Management Software

If you install memory management software such as EMM386, QEMM, 386Max, etc., you might find that it creates a conflict with the PC card drivers that your notebook uses. This conflict can cause the notebook to hang up when you try to close the Setup utility.

The solution to this problem is to modify the memory management software so that it does not use the following system and BIOS memory locations:

D000-D7FF

Consult the documentation of your memory management software for the correct method of excluding these memory locations.

If you are using the DOS memory manager EMM386, you can exclude these memory locations by modifying the line in the CONFIG.SYS start-up file that loads the memory manager so that it reads:

```
DEVICE=C:\DOS\EMM386.EXE options X=D000-D7FF
```

Appendix C: Troubleshooting

This appendix provides information on pinpointing and solving common problems that you may encounter using the notebook.

Problems with your notebook can be caused by something as minor as an unplugged power cord or as major as a damaged hard disk drive. The information in this appendix is designed to help you find and solve minor problems. If you still have a problem after trying all the suggested remedies in this appendix contact your dealer.

The problems that you might encounter can be divided into two basic categories: hardware and software. Hardware problems can be further divided into being of an electrical or a mechanical nature. You will know you have a hardware problem if, for example, the screen is blank, the notebook cannot recognize the disk drives, or you get an error message during the Power-On Self Test (POST).

Software problems can occur at several levels. Both your operating system and your software application programs are capable of generating errors and error messages. If you encounter a software error, try to determine if the error message is from your operating system or from an application program, and refer to the appropriate manual for possible remedies.

You can also refer to the Windows 95 manual of Windows Help program to solve the problem. To access the Help program, click the *Start* button, then point to *Help*. It also gives you Troubleshooting tips and an Index.

Common Problems

Successful troubleshooting is the result of careful observation, deductive reasoning, and an organized approach to solving the problem. If you encounter a problem, begin by performing a careful visual inspection. Check the exterior of the notebook first. If no lights are displayed, check the battery charge or power outlet, the plug and power cord, and any power switches that may affect your notebook. If the notebook has been connected to any peripheral devices, look for loose or disconnected cables. You may also need to check the fuses and breakers in your electric box.

A few common problems and suggested solutions are presented in the examples which follow.

Question: Why doesn't the power switch function?

- If operating from a battery, it may be discharged. Connect the AC cord.

Question: Why can't I start up the notebook?

- Use a diagnostics software available commercially to check the notebook. If you find the hard disk is damaged, you can format the hard disk by executing the FORMAT command from the CD-ROM Setup Boot Disk, then re-install Windows 95 from the CD-ROM Setup Boot Disk and Backup CD-ROM (you will lose any data files you have not backed up).

Question: Why is the screen blank?

- Press the **Space Bar** to see if any power management feature has blanked the screen to save power.
- Check the indicator lamps above the keyboard to verify that the notebook is getting power. If the power indicator lamps are not lit, check the electrical outlet, the AC adapter and the power cord.
- If you are using a battery pack, make sure it has charge remaining, and that it is installed correctly.
- Check the brightness and contrast of your display.
- Reset the notebook by pressing the **Ctrl+Alt+Del** keys.
- Turn the notebook off, wait a few seconds, and then turn the notebook back on.

Question: Why can't I use a floppy disk?

- The floppy disk may not be formatted, or could be corrupt.
- If you can't write to a floppy disk, the disk may be write-protected. Eject the disk and ensure that the write-protect tab covers the detection hole.
- If you can't write to a floppy disk, the disk may be full. Use another disk.
- The system BIOS boot settings for the floppy disk drive type may be incorrect. In the Setup utility, ensure that *Diskette A* is set to *Enabled*.

Question: Why do I get a non-system disk or disk error message?

- You may have inserted a non-bootable disk in drive A: (either a defective disk or one without an installed operating system). Remove the disk.
- If this message is issued when you attempt to boot from your hard disk drive, insert a bootable disk and check the integrity of your hard disk drive.

Question: Why is the date and/or time incorrect?

- Correct the data and time using the Windows Control Panel or the Setup utility.
- If the date and time are still incorrect when you reboot, contact your dealer.

Question: Why can't I communicate through the built-in modem? (US & Canada only) (PC-9300T only)

- Confirm the telephone line is properly connected to the modem jack.
- Read the *Troubleshooting* section in the modem manual.

Question: Why can't I print?

- Double-click *My Computer*, then *Printers*. Confirm your printer is installed here. If not, click *Add Printer* to install your printer.
- See also the *Printer Problems* section in the Windows Help Index.

Question: Why does the PC card not function when I use the COM interface?

- The card may be attempting to use the COM3 or COM4 port in a manner that conflicts with the COM1 or COM2 port being used by another device. You may be able to resolve the conflict by running the Setup utility to change the COM port settings. If your PC Card uses COM3, set the *COM 1 Port* setting to *Disabled*. If your PC Card uses COM4, set the *COM 2 Port (For IR)* setting to *Disabled*.

Question: Why can't I produce sound?

- Confirm the sound driver is installed. From the Windows *Control Panel*, click *System*, *Device Manager* tab, then *Sound, video and game controllers*, verify the *Audio Driver* is installed. If not, install the driver from the *Add New Hardware* icon in the Control Panel.

- Check the Windows volume control and mute button. Click the speaker symbol beside the clock on the task bar to open the *Volume Control* window.

Question: Why does the communication software not function? (US & Canada only) (PC-9300T only)

- To use the communication software, you have to turn off the power management. In the Windows *Control Panel*, double-click the *Power* icon. In the *Power* tab, uncheck the box for *Allow Windows to manage power use on this computer*. After using the communication software, check this box again.

Power On Self Test

The power on self-test (POST) program is executed every time the notebook is turned on or the system is rebooted. The purpose of the POST is to check that all the major components of your notebook are operating correctly.

If the POST detects a fatal error, such as a system board error, it will halt the operation of the notebook and sound a beep to alert you to the error. If a non-fatal error is detected, an error message is displayed and the POST is halted. In this case, you can resume the POST by pressing the **F1** key.

If an error is detected that requires action by the notebook user, a message will be displayed and a beep will sound. In this case, you can press **F2** to run the Setup utility and correct the problem. If you prefer to ignore the error, you can press **F1** to resume the POST.

Appendix D: System Mapping

The tables below indicate the memory mapping and the system interrupt and DMA channel assignments.

Memory Map

Memory Address	Description	Size
0000H-9FFFH	Base Memory	640 KB
A000H-BFFFH	Video Memory	128 KB
C000H-C9FFH	VGA BIOS Code	40 KB
CA00H-CFFFH	Reserved	12 KB
D000H-D7FFH	PCMCIA Driver	32 KB
D800H-DFFFH	Power Management Data Buffer	32 KB
E000H-E7FFH	Power Management Data Buffer	32 KB
E800H-EFFFH	Power Management Code	32 KB
F000H-FFFFH	System BIOS Code	64 KB

DMA Channels

DMA Channel	Assignment
Channel 0	Reserved for Audio
Channel 1	Reserved for FIR
Channel 2	FDD Drive
Channel 3	ESS ES1888
Channel 4	Cascade
Channel 5	Audio, fixed by hardware
Channel 6	Spare
Channel 7	Spare

System Interrupts

Interrupt	Assignment
0	System Timer
1	Keyboard
2	Programmable Interrupt Controller
3	COM2, Generic IR Serial Port (SHARP Serial Infra-red Port)
4	COM1, Communication Port
5	ESS ES1888
6	Floppy Disk
7	Printer Port 1
8	Real Time Clock
9	(PCMCIA Controller)
10	Modem (US & Canada only) (PC-9300T only)
11	Audio, fixed by hardware
12	PS/2 Touchpad
13	Numeric Coprocessor
14	Hard Disk Controller
15	CD-ROM Controller

I/O Address Map

Address	Assignment
000-01F	DMA Controller 1
020-021	Interrupt Controller 1
040-05F	Timer/Counter
060-06F	Keyboard Controller
070-07F	RTC, NMI Register
080-091	DMA Page Register
092-09F	System Control Port
0A0-0A1	Interrupt Controller 2
0C0-0DF	DMA Controller 2
0F0-0FF	Numeric Processor
1F0-1FF	Hard Disk Controller
200-20F	Game Port
220-22F	Audio
278-27A	Parallel Port 3
2F8-2FF	Serial Port 2
320-324	Hard Disk Controller
378-37A	Parallel Port 2
388-38B	Audio Controller
3B0-3B4	VGA Controller
3BC-3BE	Parallel Port 1
3C0-3DF	VGA Controller
3F0-3F7	Floppy Disk Controller
3F8-3FF	Serial Port 1

Appendix E: Connector Pin Assignments

Printer (Parallel) Port

Pin	Standard	EPP	ECP
1	Strobe	Write	Strobe
2	Pdata0	Pdata0	Pdata0
3	Pdata1	Pdata1	Pdata1
4	Pdata2	Pdata2	Pdata2
5	Pdata3	Pdata3	Pdata3
6	Pdata4	Pdata4	Pdata4
7	Pdata5	Pdata5	Pdata5
8	Pdata6	Pdata6	Pdata6
9	Pdata7	Pdata7	Pdata7
10	Ack	Intr	Ack
11	Busy	Wait	Busy PeriphAck (3)
12	PE	(NU)	PError nAckReverse (3)
13	Select	(NU)	Select
14	Autofd	Datastb	Autofd HostAck (3)
15	Error	(NU)	Fault (1) PeriphRequest (3)
16	Init	(NU)	Init (1) ReverseBost (3)
17	Selectin	Addrstrb	Selectin (1, 3)
18-25	GND	GND	GND

PS/2 Port

Pin	Signal	Pin	Signal
1	KBDATA	4	VCC
2	MSDATA	5	KBCLK
3	GND	6	MSCLK

Serial (RS-232C) Port

Pin	Signal	Pin	Signal
1	DCD	6	DSR
2	RD	7	RTS
3	SD	8	CTS
4	DTR	9	RI
5	GND		

External Monitor (SVGA) Port

Pin	Signal	Pin	Signal
1	Red	9	NC
2	Green	10	GND
3	Blue	11	NC
4	NC	12	SDA
5	GND	13	HSYNC
6	R-RTN	14	VSYNC
7	G-RTN	15	SCL
8	B-RTN		

Joystick/MIDI Port

Pin	Signal	Pin	Signal
1	VCC (5V)	9	VCC (5V)
2	SWITCH 0	10	SWITCH 2
3	JX1	11	JX2
4	GND	12	MIDI-OUT
5	GND	13	JY2
6	JY1	14	SWITCH 3
7	SWITCH 1	15	MIDI-IN
8	VCC (5V)		

Appendix F: Specifications

Main Unit

Model	PC-9300D	PC-9300T
CPU	Pentium 150MHz with 16KB L1 cache and 256KB L2 cache.	
ROM	256KB Flash EPROM with System BIOS, VGA BIOS, Plug and Play support.	
RAM	16 MB EDO RAM standard. Can be expanded with one memory module (8 MB, 16 MB or 32 MB).	
Floppy Disk Drive	Built-in 3.5", 1.44 MB & 720 KB .	
Hard Disk Drive	Built-in 1.4 GB hard disk drive.	
CD-ROM Drive	Built-in 5.25", 10X average speed, ATAPI interface	
Flat Panel Display	12.1" dual-scan color, 800 x 600 SVGA resolution	11.3" TFT color, 800 x 600 SVGA resolution
Video System	64-bit, PCI-bus graphics system with 2 MB Video memory. Support for Software MPEG and Zoomed Video PC cards. Ports for external SVGA display and external TV display.	
Audio System	16-bit stereo sound system compatible with Sound Blaster Pro, MS-Sound System. Built-in speakers and microphone, and audio jacks for external microphone, audio in, and audio out.	
Keyboard	87/88-keys keyboard supports all functions of 101/102 keyboard. 12 programmable function keys plus 2 Windows 95 keys.	
Pointing Device	Built-in GlidePoint touchpad with left and right buttons.	
Fax/Modem (US & Canada only)	Not available.	33.6 Kbps data, 14.4 Kbps fax, with support for voice pass through, speakerphone, and TAM (telephone answering machine) functions.
PC Card Slots	Two Type-II PC card slots (or one Type-III slot) with support for Zoomed Video (ZV) cards in one slot.	
Infrared Port	One Fast IR (FIR) port (up to 4 Mbps when using TranXit) with support for IrDA and ASK standards.	

Other I/O Ports	One serial, one parallel, one SVGA, one video-out, one game/MIDI, one PS/2, one expansion connector.	
	Not available.	One telephone (RJ11) socket (US and Canada only).
AC Adapter	18V output, 100~250V input, auto-sensing AC adapter with DC cable and power cord.	
Rechargeable Battery	9-cell, Nickel-Metal Hydride battery pack, with 3500mAh capacity.	
Dimensions	11.7" wide x 9.6" deep x 2.1" high (297mm x 244mm x 54mm)	
Weight	7.8 lbs (3.5 Kg)	7.5 lbs (3.4 Kg)

Memory Modules

Model	**CE-A311B**	**CE-A312B**	**CE-A323B**
Capacity	8 MB	16 MB	32 MB
Dimensions	2.28" wide x 1.57" deep x 0.20" high (58mm x 40mm x 5mm)		2.32" wide x 1.65" deep x 0.20" high (59mm x 42mm x 5mm)
Weight	0.033 lbs (15 g)		

Spare Battery Pack: CE-M50EB

Type	Nickel-Metal Hydride Battery Pack
Capacity	3500 mAH
Dimensions	6.89" wide x 3.03" deep x 0.87" high (175mm x 77mm x 22mm)
Weight	1.33 lbs (600 g)

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